Z
7914
R5
N2
Science
Stacks

NATIONAL RESEARCH COUNCIL.

A BIBLIOGRAPHY ON RESEARCH.

A BIBLIOGRAPHY ON RESEARCH

SELECTED ARTICLES FROM THE TECHNICAL PRESS

1923 -- 1924 -- 1925

NATIONAL RESEARCH COUNCIL
DIVISION OF ENGINEERING
AND INDUSTRIAL RESEARCH
29 WEST 39TH STREET, NEW YORK CITY

A BIBLIOGRAPHY ON RESEARCH

Z
7914
R5
N2
Science
Stacks

SELECTED ARTICLES FROM THE TECHNICAL PRESS

1923 -- 1924 -- 1925

UNIVERSITY OF ILLINOIS LIBRARY

NATIONAL RESEARCH COUNCIL
DIVISION OF ENGINEERING
AND INDUSTRIAL RESEARCH
29 WEST 39TH STREET, NEW YORK CITY

UNIVERSITY OF ARIZONA
R016.607
N27
LIBRARY

TABLE OF CONTENTS

	PAGE
Introduction	5
Aeronautics	7
Agriculture and Forestry	7
Automotive Engineering	8
Cement and Concrete	9
Ceramics	10
Chemistry:	
General	10
Industrial	11
Corrosion	13
Dyes and Paints	13
Electrical Engineering	13
Foods and Beverages	14
Foundries	15
Fuels:	
General	15
Coal	17
Petroleum	18
Gas and Oil Engines	20
Gas Plants	20
Geology	20
Heating and Ventilating	21
Highway	21
Illumination	23
Leather	23
Lubrication	24
Machine Tools	24
Marine Engineering	24
Metallurgy	25
Metals:	
Iron and Steel	27
Non-Ferrous	28
Mining	29
Ore-Dressing	31
Paper	31

82927

	Page
Physics	31
Pumps	32
Radio	33
Refrigeration	33
Research:	
General	33
Cooperative	36
Economic	37
In Industry	37
Laboratories	38
Organization	39
Reports	40
University	40
Value	41
River and Harbor	42
Rubber	42
Steam Engineering	43
Telephony	44
Textiles	44
Wire Cables and Ropes	45
Wood and Wood Preservation	46

INTRODUCTION

THE material for this bibliography has been drawn directly from reference cards on articles relative to industrial research that have appeared in the current technical press in this country and abroad.

About two years ago, the Engineering Societies' Library was commissioned by the Division of Engineering and Industrial Research of National Research Council, to review scientific, engineering, technical and trade publications for articles on research. During these two years nearly 1500 references have been accumulated.

The primary purpose in compiling and cataloging these references was an effort on the part of the Division to "feel the pulse of industry" and to maintain a close contact with its research activities. The effective use of this service has proved a valuable aid in carrying out one of the major functions of the Division, namely, the promotion of scientific and industrial research.

This bibliography is in the nature of a by-product use of material already collected. In its present form the data are made easily accessible as a reference to research activities in specific industries. The grouping of references is designed to serve a utilitarian purpose for the field of industry as a whole. In general, the arrangement and indexing follow the numerical reference numbers of the Engineering Societies' Library, which are based on the Dewey decimal system of filing.

The major subdivisions are classified according to the fields of science, engineering, or related industrial groups. One major division, i.e. "Research—General" has been subdivided under the designations "Organization—Cooperative—Value of," etc., to provide a list of references from which material for addresses and papers on any particular phase of the general subject may be obtained. Descriptive articles concerning the design, organization, and operation of research laboratories have been segregated because of the limited sources from which correlated data on this subject can be procured.

On account of the inherent interrelation of the various divi-

sions classifications cannot be hard and fast. Such classifications as have been made were for the purpose of facilitating reference.

No attempt has been made to include references on specific researches in the industries, as this bibliography is intended to cover only general articles on research. A secondary purpose is to reflect in some measure the importance and value of "applied science" in certain industries. The bibliography is, therefore, presented with the hope that it may stimulate interest in research as an industrial aid.

MAURICE HOLLAND, Director
Division of Engineering and
Industrial Research.

AERONAUTICS

629.13 Aeronautical Research. *Canadian Engineer,* Feb. 19, 1924, vol. 46, pp. 255-6. 1000 w.; *Nature,* Oct. 4, 1924, vol. 114, p. 519. 500 w.

629.13 Aeronautical Research in the United States. *Engineering,* June 15, 1923, vol. 115, pp. 748-9. 2000 w.

629.13 Aeronautical Research Committee's Annual Report. *Aeroplane,* Sept. 17, 1924, vol. 27, p. 266.

629.13 Aeronautical Research Committee Reports. *Flight,* Jan. 29, 1925, vol. 17, p. 60. 460 w.; March 12, 1925, vol. 17, p. 149. 700 w.; April 30, 1925, vol. 17, p. 260. 1000 w.

629.17 Airplane Research Work Through Flight Tests. *Aviation,* Aug. 6, 1923, vol. 15, pp. 154-55. 1000 w.

629.13 British Aeronautical Research. *Aviation,* Feb. 25, 1924, vol. 16, p. 201. 200 w.

629.13 Das Aeromechanische Versuchswesen. (Aero-mechanical research methods.) R. KATZMAYR, *Zeitschrift Oesterrereichischer Ingenieur-und Architekten Vereines,* Sept. 28, 1923, vol. 75, pp. 248-52. 4000 w.

629.13 Melbourne University Aerodynamic Laboratory. W. E. BASSETT. *Commonwealth Engineer,* June 1, 1923, vol. 10, pp. 410-12. 1700 w.

629.13 Of the Directing of Research. W. H. SAYERS. *Aeroplane,* April 16, 1924, vol. 26, pp. 326 and 328. 1100 w.

629.13 On the Organization of the Department of Supply and Research. *Aeroplane,* Jan. 23, 1924, vol. 26, p. 65. 500 w.

629.15 Photo Elastic Method Applied to Rigid Airship Research. T. H. FROST. *Journal Society Automotive Engineers,* December, 1923, vol. 13, pp. 497-8. 800 w.

629.13 Progress of Aeronautical Research. *Engineering,* Sept. 7, 1923, vol. 116, p. 304. 2000 w.

629.13 Relation Between Aeronautical Research and Aircraft Design. J. S. AMES. *Journal Royal Aeronautical Society,* August, 1923, vol. 27, pp. 381-404. Wilbur Wright lecture before Royal Aeronautical Society.

629.13 Report of the Aeronautical Research Committee for the Year 1922-23. *Aeronautics,* 1923, p. 48.

629.13 Report of the Aeronautical Research Committee 1923-24. *Flight,* Sept. 11, 1924, vol. 16, pp. 568-9. 1400 w.

629.13 Use of the Light Planes in Aeronautical Research. W. L. LEPAGE. *Aviation,* Oct. 20, 1924, vol. 17, pp. 1169-70. 1150 w.

AGRICULTURE AND FORESTRY

63.54 Agricultural Chemistry as a Career; Great Scope for Research. *Chemical Trade Journal and Chemical Engineer,* Jan. 30, 1925, vol. 76, p. 143. 800 w.

63 Agricultural Research. *Nature,* Sept. 27, 1924, vol. 114, p. 465. 800 w.

63 Agricultural Research in Relation to the Community. A. D. HALL. *Science,* April 17, 1925, vol. 61, pp. 399-403. 3600 w.

63 A. S. A. E. Starts New Research Activity. *Engineering World,* Feb. 1924, vol. 24, p. 113. 300 w.

63 **Boyce Thompson Institute for Plant Research, Yonkers, N. Y.** *Architecture and Building,* Oct. 1924, vol. 56, pp. 93-4. 1500 w.

63 **Chemical Research Reveals New Use for Tellurium.** *Chemical and Metallurgical Engineering,* April, 1925, vol. 32, pp. 413-14. 400 w. Editorial.

63 **Cuba Investigation Started by Tropical Plant Research Foundation.** *Louisiana Planter and Sugar Manufacturer,* Nov. 22, 1924, vol. 73, p. 412. 500 w.

63 **Evolution and Progress of Agricultural Engineering at the Agricultural Experiment Stations.** R. W. TRULLINGER. *Agricultural Engineering,* Jan. 1925, vol. 6, pp. 14-16. 2200 w.

634.9 **Forestry Investigation of Practical Importance.** E. T. ALLEN. *American Lumberman,* Nov. 1, 1924, No. 2581, pp. 1 and 48-9. 5000 w.

634.9 **Forest Products Have Eliminated This Waste.** *Chemical and Metallurgical Engineering,* Feb. 9, 1925, vol. 32, p. 243.

634.9 **Forest Research Council.** *Science,* April 11, 1924, vol. 59, pp. 332-3. 300 w.

63 **Major Problems in a Study of the Irrigation of Rice by Pumping.** (Research in agricultural engineering). D. G. CARTER. *Agricultural Engineering,* Feb., 1925, vol. 6, pp. 37-40. 2800 w. Bibliography, pp. 39-40.

626.8 **Pan-Pacific Scientific Research Institute.** *Louisiana Planter and Sugar Manufacturer,* Oct. 25, 1924, vol. 73, p. 322.

668.6 **Proposals for Research Work on Fertilizers from Sewage Sludge.** *Surveyor,* London, Nov. 7, 1924, vol. 66, p. 388. 500 w.

63 **Research at V. P. 1.** *Agricultural Engineering,* Jan., 1925, vol. 6, pp. 19-20. 380 w.

63 **Research in Agricultural Engineering—1923.** R. W. TRULLINGER. *Agricultural Engineering,* May, 1924, vol. 5, pp. 107-11. 5000 w.; Serial; June, 1924, vol. 5, pp. 133-4. 2000 w.; July, 1924, vol. 5, pp. 160-2 and 165. 2500 w.

658.8 **Research in Marketing.** *American Fertilizer,* May 2, 1925, vol. 62, p. 25. 400 w.

63 **Research Program of the Department of Agriculture.** E. D. BALL. *Chemical Age,* New York, December, 1923, vol. 31, pp. 565-67. 2500 w.

63 **Science and the Agricultural Crisis.** G. CROWTHER. *Nature,* Oct. 6, 1923, vol. 112, pp. 510-14. 1800 w.

541.87 **Soil Colloids and Tillage.** R. W. TRULLINGER. *Agricultural Engineering,* March, 1925, vol. 6, pp. 61-3. 2700 w. Serial.

63 **Soil Erosion as a Research Problem.** W. H. MCPHESTERS. *Agricultural Engineering,* July, 1924, vol. 5, pp. 158-60. 2500 w.

AUTOMOTIVE ENGINEERING

629.113 **Air-cooled Engine Research.** *Journal Society Automotive Engineers,* March, 1924, vol. 14, p. 344. 1800 w.

629.113 **Automotive Research.** *Journal Society Automotive Engineers,* April, 1924, vol. 14, pp. 381-2. 2000 w.; May, 1924, vol. 14, pp. 494-5. 1200 w.

629.113 **Ford Engineering Laboratory.** G. E. HAGEMAN. *Management and Administration,* March, 1925, vol. 9, pp. 219-22. 2700 w.

629.113 **Ford Research Laboratories Being Enlarged.** *Automobile Industries,* April 17, 1924, vol. 50, p. 875. 350 w.

629.113 **Recent Cooperative Fuel Research Progress.** S. W. SPARROW and J. O. EISINGER. *Journal Society Automotive Engineers,* February, 1925, vol. 16, pp. 237-42. 3000 w.

629.113 **Research.** W. R. ORMANDY. *Automobile Engineer,* November, 1924, vol. 14, pp. 372-5. 6000 w.

629.113 **Research Session Draws Crowd.** *Journal Society Automotive Engineers,* February, 1925, vol. 16, pp. 119-22. 1000 w.

629.113 **Riding Qualities Research.** J. A. C. WARNER. *Journal Society Automotive Engineers,* July, 1924, vol. 15, pp. 75-81. 4500 w.; December, 1924, vol. 15, pp. 556-61. 4400 w.

629.113 **S. A. E. Launches Ambitious Research Program for 1924.** *Automotive Industries,* March 27, 1924, vol. 50, pp. 706-7. 1200 w.

629.113 **White to Construct Plant for Research.** *Automotive Industries,* June 12, 1924, vol. 50, p. 1299. 300 w.

CEMENT AND CONCRETE

666.9 **Broad Study of Cement and Concrete to be Made.** *Concrete Products,* June, 1924, vol. 26, pp. 45-6. 1000 w.

693.5 **Building Research Board, The.** *Concrete and Constructional Engineering,* November, 1924, vol. 19, pp. 715-16. 500 w.

693.5 **Building Research Board Report. Modulus of Elasticity of Spun Concrete in Tension.** *Concrete and Constructional Engineering,* November, 1924, vol. 19, pp. 709-14. 1100 w.

666.9 **Cement Study Activated by Government Committee.** *Engineering News Record,* April 24, 1924, vol. 92, p. 725. 800 w.

(072) **Functions of Lehigh University Research Institute.** *Concrete Products,* April, 1925, vol. 28, p. 66. 100 w.

666.9 **German Research on High Alumina Cements.** C. R. PLATZMANN. *Rock Products,* Sept. 20, 1924, vol. 27, pp. 23-5. 1500 w.

666.9 **How One Industry Concentrates Its Research.** D. A. ABRAMS. *Chemical and Metallurgical Engineering,* Oct. 6, 1924, vol. 31, pp. 539-42. 2300 w.

691.2 **Report of Committee on Research of the National Crushed Stone Association.** H. H. BRANDON. *Rock Products,* March 8, 1924, vol. 27, pp. 101-2. 2000 w.

693.5 **Research Indicates Wider Use for Concrete.** *Contract Record and Engineering Review,* June 11, 1924, vol. 38, p. 593. 300 w.

693.5 **Results of Some Researches in Concrete.** Articles by R. B. CREPPS, H. F. CLEMMER, FRED HITCHCOCK and RAYMOND HARSCH. *Engineering News Record,* July 26, 1923, vol. 91, pp. 142-47. 5000 w.

666.9 **Some 1925 Lime and Gypsum Research Suggestions.** *Pit and Quarry,* Dec. 15, 1924, vol. 9, p. 56. 300 w.

666.9 **To Study Cement and Concrete from A to Z.** *Rock Products,* May 3, 1924, vol. 27, p. 65. 1000 w.

CERAMICS

666 **Application of Research to Plant Problems in the Ceramic Industry.** P. C. Kingsbury. *Industrial and Engineering Chemistry,* September, 1923, vol. 15, pp. 898-99. 2000 w.

666.1 **Fatigue Research in the Glass Industry.** *Glass Worker,* April 5, 1924, vol. 43, pp. 37-8. 400 w.

666.26 **Funds Secured for Enameling Research.** *Ceramist,* February, 1925, vol. 5, pp. 279-85. 2500 w.

666 **Is the Brick and Clay Record Proposal Feasible?** *Brick and Clay Record,* Sept. 30, 1924, vol. 65, pp. 450-3. 3500 w.

666.7 **Much Research Work on Hollow Tile.** *Brick and Clay Record,* Feb. 19, 1924, vol. 64, pp. 256-8. 2000 w.

666 **$1,000,000 for Research.** *Brick and Clay Record,* Sept. 2, 1924, vol. 65, pp. 305-12. 6000 w.; Sept. 16, 1924, vol. 65, pp. 377-9. 1300 w.

666 **Purdy Urges Ceramic Institute.** *Brick and Clay Record,* July 8, 1924, vol. 65, pp. 36-9. 1600 w.

666.76 **Report of Refractory Materials Joint Research Committee.** *Gas Journal*—Supp., July 9, 1924, pp. 17-24.

666 **Research Definitely Under Way.** *Brick and Clay Record,* March 31, 1924, vol. 66, pp. 492-3. 1000 w.

666 **Research in Manufacture of Clay Products.** *Clay Worker,* August, 1924, vol. 82, p. 120. 500 w.

666 **Research on Clay Plant Problems Now Assured.** *Brick and Clay Record,* July 22, 1924, vol. 65, pp. 93-5. 2700 w.

666 **Research Possibilities in Refractories.** M. C. Booze, *Brick and Clay Record,* Feb. 17, 1925, vol. 66, pp. 294-296. 1700 w.

622.311 **Studying Georgia Clays.** *Manufacturers Record,* April 2, 1925, vol. 87, p. 93. 600 w.

666.76 **Tentative Plan for Investigating Lime Kiln Refractories.** V. J. Azbe. *Rock Products,* Feb. 21, 1925, vol. 28, pp. 55-6. 1600 w.

CHEMISTRY—GENERAL

541.87 **American Research on Colloids.** *Chemistry and Industry,* April 10, 1925, vol. 44, p. 371. 100 w.

54 **Chemical Research Activity in Various Countries of the World.** E. J. Crane. *Industrial and Engineering Chemistry,* July, 1924, vol. 16, p. 734. 400 w.

54 **Chemical Research and Commercial Rivalry.** *Chemical Age,* New York, November, 1923, vol. 31, pp. 508-9. 1200 w.

54 **Chemical Research and Medical Practice.** W. Wilcox. *Chemical Age,* London, Nov. 15, 1924, vol. 11, pp. 495-6. 1100 w.

54 **Chemical Research in India.** *Chemical Trade Journal and Chemical Engineer,* May 9, 1924, vol. 74, pp. 561-2. 1700 w.

546.24 **Chemical Research Reveals New Use for Tellurium.** *Chemical and Metallurgical Engineering,* April, 1925, vol. 32, pp. 413-14. 400 w. Editorial.

614.3 **Chemistry and the State.** R. Robertson. *Chemistry and Industry,* Aug. 15, 1924, vol. 43, pp. 820-30; *Science,* Aug. 22, 1924, vol. 60, pp. 165-71. 6000 w.; *Nature,* Sept. 13, 1924, vol. 114, pp. 383-6. 3200 w.

541.87 **Great Temple of the Future, A.** *Chemical and Metallurgical Engineering,* April 7, 1924, vol. 30, pp. 540-1. 1500 w.

54 **Group of Interesting Research Papers, A.** *Chemical Age,* London, Feb. 7, 1925, vol. 12, p. 131. 900 w.

54 **List of Research Problems in Chemistry.** J. E. Zanetti. *Industrial and Engineering Chemistry,* March, 1924, vol. 16, pp. 304-7. 2500 w.

541.87 **National Institute for Research in Colloid Chemistry.** *Science,* March 27, 1925, vol. 61, pp. 333-4. 1000 w.

541.87 **National Institute of Colloid Research.** *Chemical Age,* London, June 14, 1924, vol. 10, p. 625. 200 w.

54 **New Chemical Research Laboratory at Teddington.** *Chemical Age,* London, Feb. 21, 1925, vol. 12, p. 178. 300 w.

546.432 **New Radium Research Laboratory.** *Forging—Stamping—Heat-Treating,* March, 1924, vol. 10, p. 133. 200 w.

541.12 **Potentialities of Catalytic Research in the Chemical Industry.** H. S. Taylor. *Industrial and Engineering Chemistry,* September, 1923, vol. 15, pp. 902-4. 2000 w.

541.1 **Recent Research on Crystalline Structure.** *Chemical News,* May 1, 1925, vol 130, pp. 283-4. 1200 w.

54 **Die Roentgenographische Methode als Hilfmittel der Chemischen Forschung.** (Roentgen ray as an aid in chemical research). A. Reis. *Zeitschrift Fur Angewandte Chemie,* March 19, 1925, vol. 38, pp. 249-51. 1100 w.

547 **Some Recent Researches in Organic Chemistry.** R. F. Hunter. *Chemical News,* Oct. 19, 1923, vol. 127, pp. 243-5. 1500 w. Serial; Oct. 26, 1923, vol. 127, pp. 261-3 2000 w.

54 **State Research in Chemistry.** *Chemistry and Industry,* Feb. 20, 1925, vol. 44, p. 186. 250 w.

541.14 **Trends in Photochemical Research.** J. H. Mathews. *Industrial and Engineering Chemistry,* September, 1923, vol. 15, pp. 885-7. 2000 w.

54 **Universities as Centres of Chemical Research.** W. P. Wynne. *Journal Chemical Society,* April, 1925, vol. 127, pp. 936-54.

541.12 **What Do We Know About Catalysis?** *Chemical and Metallurgical Engineering,* Jan. 28, 1924, vol. 30, pp. 147-8. 1300 w.

CHEMISTRY—INDUSTRIAL

668.74 **Benzole Research.** *Gas Journal,* May 6, 1925, vol. 170, pp. 363-5. 2400 w.

66 **Chemical Research Activity in the Various Countries of the World.** E. J. Crane. *Industrial and Engineering Chemistry,* July, 1924, vol. 16, p. 754. 400 w.

608 **Chemical Research and Commercial Rivalry.** *Chemical Age,* New York, Nov. 1923, vol. 31, pp. 508-9. 1200 w.

6(072) **Chemical Research in India.** J. F. Thorpe. *Journal Royal Society of Arts,* June 6, 1924, vol. 72, pp. 478-87; *Nature,* June 28, 1924, vol. 113, pp. 928-9. 1800 w.

6(072) **Chemist in the Power Plant.** *Chemical Trade Journal and Chemical Engineer,* June 20, 1924, vol. 74, p. 737. 1000 w.

66 **Chemistry and the State.** R. ROBERTSON. *Chemistry and Industry,* Aug. 15, 1924, vol. 43, pp. 820-30; *Science,* Aug. 22, 1924, vol. 60, pp. 165-71. 6000 w.; *Nature,* Sept. 13, 1924, vol. 114, pp. 383-6. 3200 w.

66 **Chemists Recommend Research Program to Develop New Oil Products.** P. TRUESDELL. *National Petroleum News,* April 15, 1925, vol. 17, pp. 33-4. 1000 w.

660.58 **Factory Experimental Apparatus.** H. C. COOPER. *Chemical and Metallurgical Engineering,* April, 1925, vol. 32, p. 426. 1000 w.

66 **Importance of Research to the Empire.** (Progress in Germany). *Gas World,* April 11, 1925, vol. 82, p. 327. 700 w.

66 **Industrial Progress Forecast by Chemical Research.** *Chemical and Metallurgical Engineering,* May 5, 1924, vol. 30, pp. 707-14. 5500 w.

66 **Inventive Ingenuity in Applied Chemistry.** *Chemical Age,* New York, October, 1923, vol. 31, pp. 473-6. 5000 w.

6(072) **List of Research Problems in Chemistry.** J. E. ZANETTI. *Industrial and Engineering Chemistry,* March, 1924, vol. 16, pp. 304-7. 2500 w.

66 **New Chemical Research Laboratory at Teddington.** *Chemical Age,* London, Feb. 21, 1925, vol. 12, p. 178. 300 w.

66 **Organization of Chemical Research in India.** J. F. THORPE. *Chemical Age,* London, May 10, 1924, vol. 10, pp. 484-5. 2000 w.

661.62 **Progress in Fixed Nitrogen Research.** *Army Ordnance,* Jan.-Feb., 1924, vol. 4, p. 236. 350 w.

661.8432 **Radium Research.** C. E. S. PHILLIPS. *Chemical Age,* London, March 7, 1925, vol. 12, p. 228. 700 w.

661.62 **Report of the Fixed Nitrogen Research Laboratory.** F. G. COTTRELL. *Chemical Age,* New York, December, 1924, vol. 32, pp. 485-7. 2000 w.

66 **Research and Experiment.** *Chemical Age,* London, March 28, 1925, vol. 12, p. 293. 220 w.

66 **Research Laboratory with a Human Product.** C. TYLER. *Chemical and Metallurgical Engineering,* Feb. 16, 1925, vol. 32, pp. 285-8. 2200 w.

661.62 **Research on Nitrogen Fixation.** *Chemical and Metallurgical Engineering,* Dec. 10, 1923, vol. 29, pp. 1047-50. 3000 w.

661.9 **Research Work on Industrial Oxygen.** *Chemical Age,* London, June 16, 1923, vol. 8, pp. 642-6. 3500 w.

661.1628 **Silica-gel—A Typical Example of Applied Research.** C. A. FULTON. *Chemical Age,* New York, November, 1923, vol. 31, pp. 521-2. 2000 w.

608 **Some Pitfalls of Chemical Invention.** H. A. TOULMIN, JR. and J. HEYWOOD. *Chemical and Metallurgical Engineering,* Jan. 26, 1925, vol. 32, pp. 157-8. 1600 w.

66 **State Research in Chemistry.** *Chemistry and Industry,* Feb. 20, 1925, vol. 44, p. 186. 250 w.

608 **Sur l'Invention et la Recherche Scientifiques.** (Invention and scientific research). G. CLAUDE. *Chimie et Industrie,* May, 1923, vol. 9, pp. 1009-22.

66 **Toronto Section, S. C. I. and Canadian Institute Hear Latest Research Work as Carried On by the New Jersey Zinc Co.** BREYER. *Canadian Chemistry and Metallurgy,* March, 1925, vol. 9, p. 70. 800 w.

CORROSION

620.1224 Corrosion of Metals: Recent German Research. *Chemical Age,* London, (Metallurgical Section), April 4, 1925, vol. 12, pp. 25-6. 1000 w.

620.1224 Non-ferrous Metals. Research on Corrosion. *Times Trade and Engineering Supplement,* Jan. 26, 1924, vol. 13, p. XIII. 1100 w.

620.1224 Recent Corrosion Research. *South African Mining and Engineering Journal,* Nov. 1, 1924, vol. 35, p. 211. 600 w.

620.1224 Research Into the Corrosion Problem. *Chemical Age,* London, Sept. 13, 1924, vol. 11, p. 263. 400 w.

DYES AND PAINTS

667.2 Dyestuffs Research and Production. *Chemical Age,* London, Oct. 25, 1924, vol. 11, pp. 409-10. 750 w.

667.6 Paint Durability Being Increased. H. C. Mougey. *Journal Society Automotive Engineers,* April, 1924, vol. 14, p. 380. 400 w.

667.6 Research Bulletins for Rubber and Plant Chemists. *Canadian Chemistry and Metallurgy,* January, 1925, vol. 9, p. 11. 700 w.

667.6 Research for Better Paints, A. *Brass World,* March, 1925, vol. 21, p. 82. 700 w.

667.2 Research in Ionamine Dyestuffs. A. G. Green and K. H. Saunders. *Chemical Age,* London, Feb. 9, 1924, vol. 10, p. 140. 500 w.

667.2 Research on Colour Intermediates. Morgan and Others. *Chemical Age,* London, Nov. 17, 1923, vol. 9, p. 543. 1000 w.

667.2 Recent Progress in the Vat Dyestuff Industry. B. DePuyster. *Color Trade Journal,* March, 1924, vol. 14, pp. 88-92. 4000 w.

667.2 Status of Research in Dye Industry. *Chemical and Metallurgical Engineering,* Dec. 17, 1923, vol. 29, p. 1105. 500 w.

ELECTRICAL ENGINEERING

621.3 Applied Research in Electrical Engineering. *Engineering,* March 7, 1924, vol. 117, p. 309. 500 w.

621.3 Applying the Results of High Voltage Research to Practice. F. W. Peek, Jr. *General Electric Review,* June, 1923, vol. 26, p. 407-11.

621.3 British National Physical Laboratory. *Electrical Engineer,* Jan. 15, 1925, vol. 1, p. 391. 800 w.

621.3 Das National Physical Laboratory in Teddington, England. *Elecktrotechnik und Maschinenbau,* Feb. 8, 1925, vol. 43, pp. 107-9. 1100 w.

620.1 Detroit Conducts Test Laboratory. *Electric Railway Journal,* June 28, 1924, vol. 63, pp. 1015-18. 2000 w.

621.3 Electrical Engineering Development. Importance of Industrial Research. A. Russell. *Industrial Australian and Mining Standard,* Jan. 10, 1924, vol. 71, p. 51. 900 w.

621.3 Electrical Research. *Mechanical World,* Jan. 25, 1924, vol. 75, p. 45. 200 w. Editorial.

621.3 **Henley's Research Laboratories.** *Electrical Review,* Dec. 5, 1924, vol. 95, pp. 859-60. 500 w.

621.3 **High Voltage Testing Laboratory.** *Engineer,* May, 1, 1925, vol. 139, pp. 481-3. 1600 w.

621.3 **Industrial Research with Special Reference to Electrical Engineering.** *Machinery Market.* Dec. 28, 1923, pp. 29-30. Serial. 2200 w.

621.3 **Industrial Research with Special Reference to Electrical Engineering Development.** W. Wilson. With discussion. *Journal Institute Electrical Engineers,* January, 1924, vol. 62, pp. 61-107.

621.3 **Influence of Research on Design.** *Electrical Engineer,* Feb. 15, 1925, vol. 1, p. 420. 400 w.

621.3 **Laboratoire Ampère d'Essais à 1,000,000 de Volts.** (Ampere 1,000,000 volt testing laboratory). d'Arsonval. *Comptes Rendus,* Dec. 26, 1923, vol. 177, pp. 1429-31. 1800 w.

621.3 **Les Travaux du Laboratoire Central d'Electricité Depuis sa Fondation.** (Work of the Central Electrical Laboratory since its beginning). M. P. Janet. *Bulletin Société Française des Electriciens,* January, 1924, vol. 4, pp. 93-122.

621.3 **Physical Society and Research, The.** *Electrical Review,* March 28, 1924, vol. 94, pp. 481-2. 600 w.

6(072) **Research Laboratories at Maribyrong, Victoria.** *Australasian Electrical Times,* Oct. 27, 1923, vol. 2, pp. 696, 699-700. 1200 w.

621.3 **Research Work in Electricity.** *Industrial Australian and Mining Standard,* April 16, 1925, vol. 73, p. 510. 500 w.

621.315 **Stanford University to Install 2,000,000 Volt Testing Outfit.** *Western Machinery World,* April, 1925, vol. 16, p. 147. 200 w.

FOODS AND BEVERAGES

664.1 **Cuba Investigation Started by Tropical Plant Research Foundation.** *Louisiana Planter and Sugar Manufacturer,* Nov. 22, 1924, vol. 73, p. 412. 500 w.

664.8 **Food Investigation Board.** *Cold Storage,* Jan. 15, 1925, vol. 28, pp. 5-8. 2800 w.

664.8 **Governmental Research Work on Perishable Products.** *Ice and Refrigeration,* January, 1925, vol. 68, pp. 16-17. 1700 w.

664.9 **Industry Organizes for Progress, An.** *Chemical and Metallurgical Engineering,* March 3, 1924, pp. 341-3. 2000 w.

663.4 **Institute of Brewing Research Scheme.** H. E. Armstrong. *Chemistry and Industry,* Oct. 24, 1924, vol. 43, pp. 1051-2. 2000 w.

665 **Research Into the Chemistry of Fats.** *Chemical Age,* London, July 12, 1924, vol. 11, pp. 30-31. 1000 w.

664.1 **Scientific Research in Connection with the Sugar Industry.** R. G. W. Farnell. *International Sugar Journal,* June, 1924, vol. 26, pp. 303-7. 2500 w.

664.1 **Sugar Industry Research Institute of Prague.** E. Saillard. *Louisiana Planter and Sugar Manufacturer,* Nov. 8, 1924, vol. 73, pp. 368-9. 1800 w.

664.1 **Tropical Plant Research Foundation.** *Sugar,* December, 1924, vol. 26, p. 595. 700 w.

FOUNDRIES

621.72 **Electric Steel Founders Research Group. Five Steel Companies Using the Electric Method of Melting Agree to Anneal All Castings.** *Automotive Industries,* Nov. 27, 1924, vol. 51, p. 926. 900 w.

621.72 **Unification of Effort in Foundry Research and Effort.** *Foundry Trade Journal,* April 17, 1924, vol. 29, p. 309.

621.72 **French Establish Foundry School.** *Iron Trade Review,* April 10, 1924, vol. 74, pp. 992-4. 1200 w.

621.72 **Ideal Foundry Research.** *Foundry Trade Journal,* Feb. 28, 1924, vol. 29, p. 165. 500 w.

621.72 **Investigate Cast Iron.** *Foundry,* April 1, 1924, vol. 52, p. 271. 100 w.

621.72 **Malleable Castings Improved Through Research.** *Engineering Journal,* April, 1925, vol. 8, pp. 165-6. 300 w.

621.72 **Metallurgical Research in England.** W. Rosenhain, *Iron Age,* April 16, 1925, vol. 115, pp. 1129-31. 1600 w.

621.72 **Molding Sand Reclamation Experiments.** A. A. Grubb. *Bulletin American Foundrymen's Association,* January, 1924, vol. 3, pp. 19-21. 2000 w.

621.72 **New Era in Foundry Research.** *Foundry Trade Journal,* March 27, 1924, vol. 29, p. 247. 500 w.

621.72 **New Laboratory Aids Foundry.** *Foundry,* July 1, 1923, vol. 51, pp. 542-3. 1000 w.

621.72 **Report Progress in Research on Molding Sands.** *Iron Trade Review,* Oct. 23, 1924, vol. 75, pp. 1100-1. 900 w.

621.72 **Research on Molding Sand Arouses Keen Interest.** *Iron Trade Review,* May 10, 1923, vol. 72, pp. 1395-6. 1000 w.

621.72 **Research Work on Molding Sand, New and Old.** *Canadian Foundryman,* September, 1924, vol. 15, p. 19. 1000 w.

621.72 **Scope and Progress of Non-ferrous Foundry Research.** *Foundry Trade Journal,* March 5, 1925, vol. 31, pp. 195-6. 1100 w.

621.72 **Steel Castings Producers Co-operate in Industrial Research.** *Railway Review,* March 1, 1924, vol. 74, p. 383. 400 w.

669.1 **Steel Foundries and Cooperative Research.** W. J. Carbett. *Iron Age,* Sept. 13, 1923, vol. 112, pp. 675 and 731. 2000 w.

621.72 **Steel Foundries Need Research.** E. R. Young. *Foundry,* Jan. 1, 1925, vol. 53, pp. 14-15. 1500 w.

621.72 **Tentatively Adopt Sand Tests.** *Foundry,* Sept. 15, 1924, vol. 52, p. 713. 300 w.

621.72 **Tentatively Adopted Methods of Tests and Résumé of Activities of the Joint Committee on Molding Sand Research.** *American Foundrymen's Association,* June 1, 1924. 83 pp.

FUELS—GENERAL

662.761 **British Experience in Producing Fuel Gas for Research Work.** W. Hamilton Gordon. *Combustion,* April, 1925, vol. 12, pp. 286-7. 200 w.

662.6 **Carnegie Tech to Continue Fuel Research.** *Gas Age-Record,* April 5, 1924, vol. 3, p. 435. 300 w.

662.7412 **Dr. Lander on Fuel Research.** *Chemical Age,* London, April 11, 1925, vol. 12, p. 357. 900 w.

662.6 **Fuel of the Future.** F. W. GOODENOUGH. *Gas Journal,* Jan. 9, 1924, vol. 165 pp. 84-5. 1500 w.

662.65 **Fuel Research.** *Nature,* Jan. 24, 1925, vol. 115, pp. 109-10. 1500 w.

662.65 **Fuel Research Board.** *Engineering,* April 20, 1923, vol. 115, pp. 485-7. 3800 w.

662.6 **La Science du Chauffage Industrial et le Role des Laboratoires d'Etudes de Combustibles.** (Science of industrial heating and the use of fuel research laboratories). E. BRUET. *Outillage,* June 2, 1923, vol. 314, pp. 627-9. 2000 w.

662.7412 **Low Temperature Carbonization and the Need for a National Scientific Policy.** D. BROWNLIE. *Chemistry and Metallurgy,* Jan. 4, 1924, vol. 43, pp. 2-4. 1600 w.

662.7412 **Low Temperature Carbonization Research.** *Gas Journal,* Aug. 13, 1924, vol. 167, p. 582. 500 w.

662.65 **Mining Research at Birmingham.** *Chemical Age,* London, Jan. 31, 1925, vol. 12, p. 113.

662.65 **Mining Research Chemistry.** *Gas Journal,* London, Jan. 28, 1925, vol. 169, p. 194. 200 w.

662.6 **Notes on Recent Developments in Fuel Technology.** R. WIGGINTON. *Fuel in Science and Practice,* January, 1924, vol. 3, pp. 1-2. 1500 w.

662.65 **Notes on the Work of the British Fuel Research Board.** C. H. LANDER. *Fuel in Science and Practice,* July, 1923, vol. 2, pp. 191-4. 4000 w.

662.74 **Possibilities of Future Carbonization.** H. B. KNOWLES. *Gas Engineer,* May, 1924, vol. 40, pp. 102-3. 500 w.

662.65 **Recent Research Work at the Municipal College of Technology, Manchester.** *Gas Journal,* June 18, 1924, vol. 166, p. 850. 500 w.

662.769 **Recherches sur l'Epuration Electrique des Gaz de Hauts Fourneaux.** (Researches on the electric purification of blast furnace gas). G. BARRIERE. *Revue de Metallurgie,* January, 1925, pp. 21-38.

662.74 **Research Problems for Coke Oven Managers.** *Colliery Guardian,* Dec. 12, 1924, vol. 128, p. 1498. 500 w.

662.6 **Results of Researches. Manchester College of Technology.** *Gas World,* July 5, 1924, vol. 81, p. 20. 500 w.

662.74 **Scientific Research in 1923-24.** *Colliery Guardian,* Oct. 3, 1924, vol. 128, pp. 870-1 1600 w.

662.65 **Visit to H. M. Fuel Research Station.** *Gas Journal,* Oct. 17, 1923, vol. 164, pp. 184-6. 2500 w.

662.65 **Work of the Fuel Research Board.** *Gas Journal,* Oct. 10, 1923, vol. 164, p. 134. 1000 w.; *Iron and Coal Trade Review,* Jan. 18, 1924, vol. 108, pp. 87-8. 3500 w.; Jan. 25, 1924, vol. 108, pp. 142-3. 3000 w.

662.65 **Work of the Fuel Research Board.** C. H. LANDER. *Colliery Guardian,* Jan. 25, 1924, vol. 127, pp. 213-14. 2000 w.; *Transactions Institute of Mining Engineers,* February, 1924, vol. 66, pp. 243-61. With discussion.

FUELS—COAL

622.33 **Anthracite Operators Research Work.** *Black Diamond,* Dec. 6, 1924, vol. 73, p. 641. 700 w.

622.338 **Bituminous Sand Research.** *Canadian Mining Journal,* Dec. 26, 1924, vol. 45, pp. 1270-6. 1100 w.

6(072) **British Progress in Coal Research.** A. C. BLACKWELL. *Black Diamond,* Nov. 22, 1924, vol. 73, pp. 579-80. 2000 w.

622.33 **Carnegie Institute Will Investigate Coal-Mining Problems.** *Coal Age,* Feb. 28, 1924, vol. 25, p. 315. 400 w.

622.33 **Coal Research.** *Chemical Trade Journal and Chemical Engineer,* Jan. 16, 1925, vol. 76, p. 70. 300 w.

662.65 **Coal Research and Propaganda.** *Gas and Oil Power,* Feb. 5, 1925, vol. 20, p. 96. 350 w.

622.33 **Colliery Owners and Research.** *Colliery Guardian,* Jan. 9, 1925, vol. 129, pp. 101-2. 3000 w.

622.8 **Developments in the Use of Pulverized Coal.** C. LONGENECKER. *Power Plant Engineering,* Jan. 15, 1924, vol. 28, pp. 127-30. 800 w.

662.65 **Experimental Coal Testing Plant at Neepsend.** E. J. JACKSON. *Gas Engineer,* Feb. 1925, vol. 41, p. 28. 800 w.

668.74 **Experiments on Extraction of Benzene from Coal Gas. By Joint Research Committee Benzole Association, Leeds University.** A. C. BLACKWELL. *Gas Age-Record,* Dec. 6, 1924, vol. 54, p. 794. 800 w.

662.7412 **German Researches on the Distillation of Coal, at Low Temperatures.** E. AUDIBERT and A. RAINEAU. *Fuel in Science and Practice,* April, 1925, vol. 4, pp. 176-8. Serial. 1900 w.; May, 1925, vol. 4, pp. 222-6. (Revue de l'Industrie Minerale.)

662.8 **German Research Station for Pulverized Fuel.** *Iron and Coal Trade Review,* Aug. 22, 1924, vol. 109, p. 315. 1000 w.; *Foundry Trade Journal,* Aug. 28, 1924, vol. 30, p. 186. 1100 w.

622.338 **Industry Beginning to Realize Scientific Research Necessary.** C. E. KERN. *Oil and Gas Journal,* Jan. 8, 1925, vol. 23, pp. 90, 114-15. 1800 w.

668.74 **Joint Benzole Research Committee, Second Report.** *Iron and Coal Trade Review,* March 27, 1925, vol. 110, p. 504. 200 w.

662.75 **Liquid Fuels from Coal a Result of Chemical Research.** *Gas Age-Record,* Sept. 15, 1923, vol. 52, pp. 307-10. 4000 w.

662.7412 **Low Temperature Carbonization of Coal. Department of Scientific and Industrial Research.** *Journal Institution Petroleum Technologists,* Nov. 1924, vol. 10, pp. XIV-XVI. 600 w.

622.33 **Present Day Research Organization.** R. V. WHEELER. *Colliery Engineer,* April, 1924, vol. 1, pp. 62-3. 1100 w.

662.65 **Professor Bone on Coal Research.** W. A. BONE. *Chemical Age,* London, April 11, 1925, vol. 12, p. 358. 400 w.

622.338 **Ziele und Ergebnisse der Kohlenforschung.** (Aims and results of coal research). H MÜLLER. *Bergbau,* Jan. 22, 1925, vol. 38, pp. 53-5. 800 w.

FUELS—PETROLEUM

665.5 **Administrative Hindrances to Research Work in France.** *Petroleum Times,* Jan. 17, 1925, vol. 13, pp. 109-10. 1200 w.

665.5 **Bureau of Standards Aids Oil Industry.** F. C. Brown. *Oil and Gas Journal,* March 13, 1924, vol. 23, p. 36. 800 w.

622.338 **Bureau of Standards Petroleum Work.** T. S. Sligh. *Oil and Gas Journal,* Oct. 9, 1924, vol. 23, pp. 213-19. 2000 w.

665.5 **Chemists Recommend Research Program to Develop New Oil Products.** P. Truesdell. *National Petroleum News,* April 15, 1925, vol. 17, pp. 33-4. 1000 w.

665.5 **Committee of Chemists Plan Program for Petroleum Research.** L. M. Fanning. *Oil and Gas Journal,* July 10, 1924, vol. 23, pp. 78 and 82. 1700 w.

622.338 **Eighty Per Cent of Oil Not Recovered. Need of Research to Decrease Costs.** K. C. Heald. *Oil and Gas Journal,* Oct. 18, 1923, vol. 22, pp. 58-82. 1200 w.

665.5 **Equipment Research to Solve Problems, Captain Lucey Says.** L. M. Fanning. *Oil and Gas Journal,* March 13, 1924, vol. 23, pp. 118-9. 1000 w.

665.5 **Experimental Still for the Study of Crude Oil.** *Petroleum Times,* Jan. 31, vol. 13, p. 192. 400 w.

665.5 **Form Petroleum Research Committee.** L. M. Fanning. *Oil and Gas Journal,* Nov. 6, 1924, vol. 23, p. 34. 1500 w.

622.38 **Geologist and the Petroleum Industry.** E. de Golyer. *Oil Engineering and Finance,* January, 1925, vol. 6, pp. 24-6. 2100 w.

662.75 **Heat and Power Research in Petroleum.** H. C. Dickinson. *Oil and Gas Journal,* Aug. 7, 1924, vol. 23, pp. 41 and 110. 2000 w.

622.338 **Immediate Need for Petroleum Research.** G. O. Smith. *Oil and Gas Journal,* April 17, 1924, vol. 23, pp. 60 and 64. 2200 w.

662.6 **Important Fuel Developments During 1924.** H. W. Brooks. *Gas Age-Record,* Feb. 21, 1925, vol. 55, pp. 265-7. 1700 w.

665.5 **Laboratory Control Work Is Explained.** W. E. Espy. *Oil and Gas Journal,* Jan. 10, 1924, vol. 23, pp. 76, 84 and 86.

662.75 **Modern Trend in Oil Fuel Research.** *Petroleum Times,* Oct. 6, 1923, vol. 10, p. 489. 1000 w.

665.54 **Motorists Gain by Gasoline Research.** C. E. Kern. *Oil and Gas Journal,* Oct. 18, 1923, vol. 22, p. 78. 1200 w.

622.338 **National Research Council and Oil Geology.** K. C. Heald. *Bulletin American Association Petroleum Geologists,* September, October, 1923, vol. 7, pp. 467-72. 3000 w.

622.338 **Necessity for Petroleum Research.** G. O. Smith. *Petroleum Times,* May 10, 1924, vol. 11, pp. 657-8. 1800 w.

622.338 **Oil Industry's Stake in Research Work in Geology.** K. C. Heald. *National Petroleum News,* Oct. 17, 1923, vol. 15, pp. 32G-32H. 1500 w.

665.45 **Oil Shale Research.** *Queensland Government Mining Journal,* Jan. 15, 1924, vol. 25, p. 6. 500 w.

669.6 **Our Research Laboratory.** R. E. Haylett. *Union Oil Bulletin,* August, 1924, Bulletin 42, pp. 2-6. 800 w.

665.5 **Petroleum Chemical Research Is Urged by Dr. J. F. Norris.** *Oil, Paint and Drug Reporter,* March 16, 1925, vol. 107, p. 19. 300 w.

665.45 **Plan of Oil Shale Investigation at the Colorado School of Mines.** R. C. Beckstrom. *Colorado School of Mines Quarterly,* October, 1924, vol. 19, pp. 86-8. 600 w.

665.5 **Practical Points in Establishing Petroleum Institute of Research.** R. H. Johnson. *Oil and Gas Journal,* March 6, 1924, vol. 23, p. 106. 800 w.

665.5 **Progress in Petroleum Research Awaiting Program and Finance.** L. M. Fanning. *Oil and Gas Journal,* May 7, 1925, vol. 23, pp. 82, 84. 1500 w.

665.5 **Recent Researches Bearing Upon the Origin of Petroleum.** E. H. Cunningham-Craig. *Journal Institution Petroleum Technologists,* October, 1923, vol. 9, pp. 344-67.

665.5 **Refiner's Interest in Research Work.** B. T. Brooks. *Oil and Gas Journal,* Feb. 26, 1925, vol. 23, pp. 102 and 227.

665.5 **Research for the Petroleum Industry.** R. F. Bacon. *Industrial and Engineering Chemistry.* September, 1923, vol. 15, pp. 888-90. 2500 w.

662.75 **Research for Petroleum Substitutes.** *Oil and Gas Journal,* Dec. 25, 1924, vol. 23, pp. 34, 36.

662.75 **Research in Chemistry of Gasoline and Carbons.** *Oil Trade,* February, 1925, vol. 16, pp. 70-1. 400 w.

665.5 **Research to Save Irreparable Losses.** C. E. Kern. *Oil and Gas Journal,* Jan. 17, 1924, vol. 23, p. 34. 1500 w.

665.5 **Research Work Being Conducted in Problems of Oil Industry.** *Oil and Gas Journal,* Dec. 11, 1924, vol. 23, p. 62. 890 w.

665 **Research Work of Bureau of Mines. Separation of Wax from Distillate.** L. D. Wyant. *Oil and Gas Journal,* Oct. 2, 1924, vol. 23, pp. 224, 272 and 288. 3000 w.

665.45 **Research Work on Oil Shale.** *Chemical and Metallurgical Engineering,* Nov. 26, 1923, vol. 29, p. 971. 500 w.

665.5 **Research Work Will Be Given Impetus.** L. M. Fanning. *Oil and Gas Journal,* Feb. 14, 1924, vol. 23, pp. 21 and 128. 1600 w.

662.75 **Researches Develop Better Fuel Utilization.** T. Midgley and H. H. McCarty. *Automotive Industries,* Jan. 31, 1924, vol. 50, pp. 232-4. 1200 w.

622.338 **Researches in Geology of Finding Oil.** D. White. *Oil and Gas Journal,* Oct. 9, 1924, vol. 23, pp. 64 A, 196 H. 2900 w.

622.338 **Researches in Geology of Finding and Recovery of Oil.** D. White. *National Petroleum News.* Oct. 22, 1924, vol. 16, pp. 85-7. 1600 w.

622.338 **Researches in Geology of Finding Oil.** D. White. *Petroleum World,* December, 1924, vol. 21, pp. 515-16. 3300 w.

662.761 **Researches on Producer Practice.** *Gas Journal,* Aug. 27, 1924, vol. 167, p. 695. 500 w.

622.338 **Scientists, Aid to Petroleum Engineer.** S. C. Herold. *Oil and Gas Journal,* Feb. 19, 1925, vol. 23, pp. 54, 62, 64, 66 and 70. 4500 w.

665.5 **Soft Coal Industry Takes Belated Steps to Meet Fuel Oil Competition.** P. Wooten. *Coal Age,* Oct. 23, 1924, vol. 26, p. 588. 800 w.

665.45 **Some Recent Developments in Oil Shale Research.** D. E. Winchester. *Mineral Age,* April, 1924, vol. 9, p. 13. 600 w.

665.5 **Some Recent Researches Bearing Upon the Origin of Petroleum.** *Journal Institution Petroleum Technologists,* December, 1923, vol. 9, pp. 469-71. Discussion. 1200 w.

665.5 **Studying Fundamentals of Petroleum Chemistry.** J. T. B. BOWLES. *Oil Trade,* May, 1925, vol. 16, p. 34. 700 w.

665.5 **Tomorrow's Possibilities in Research.** H. F. BAIN. *Oil and Gas Journal,* June 12, 1924, vol. 23, pp. 58 and 90. 1000 w.

665.5 **What Bureau of Mines Does for Refiner.** H. H. HILL. *Oil and Gas Journal,* Feb. 26, 1925, vol. 23, pp. 98 and 122. 2900 w.

GAS AND OIL-ENGINES

621.43173 **Hot Spot Temperature Requirements Determined by Purdue Research.** *Automotive Industries,* Jan. 17, 1924, vol. 50, pp. 120-3. 2000 w.

621.43 **Norges Tekniske Hiskoles Oljemaskin-Laboratorium.** (Norwegian technical high school oil-laboratory). R. LUTZ. *Teknisk Ukeblad,* March 27, 1925, vol. 72, pp. 128-30. 1000 w.

621.43175 **Oil Engine Research at Langley Field.** *Oil Engine Power,* March, 1925, vol. 3, pp. 166-71. 2350 w.

GAS PLANTS

665.7 **Experimental Gas Plant Installed at Leeds University.** A. C. BLACKALL. *Gas Age-Record,* May 24, 1924, vol. 53, pp. 717-19. 1500 w.

665.7 **Gas Department Research Work.** WALTER and GREEN. *Gas World,* Feb. 21, 1925, vol. 82, p. 143. 500 w.

665.7 **Inauguration of Experimental Coal-Gas Plant at Leeds University.** *Gas Journal,* April 2, 1924, vol. 166, pp. 27-9. 2000 w.

665.7 **Industrial Gas Research Foundation Is Advocated. Let's Get Down to Business."** C. H. LIGHT. *American Gas Journal,* Feb. 21, 1925, vol. 122, pp. 157-8, 172-3. 1700 w.

665.7 **Technical Problems of the Gas Industry.** *Gas Engineer,* April, 1925, vol. 41, p. 69. 900 w.

665.7 **Twelfth Report of the Research Sub-committee of the Gas Investigation Committee, London.** *Gas Journal,* July 2, 1924, vol. 167, pp. 106-22.

665.791 **Water Gas Plant Tested by British Research Board.** C. H. S. TUPHOLME. *Gas Age-Record,* Aug. 18, 1923, vol. 52, pp. 185-90.

GEOLOGY

55 **Institute for Geological Research.** *Engineering and Mining Journal Press,* Sept. 13, 1924, vol. 118, p. 401. 600 w. Editorial.

551.46 **Oceanic Research.** *Nature,* March 14, 1925, vol. 115, pp. 369-72. 1500 w.

551.46 **Off to Explore Sargasso Sea.** *Marine News,* March, 1925, vol. 11, p. 66. 400 w.

551.46 **Our Knowledge of the Earth's Natural Resources.** G. E. BRANDT. *Manufacturers' Record,* Oct. 16, 1924, vol. 86, pp. 67-71. 2000 w.

56 **Research in Micro-Faunas.** *Mining and Metallurgy,* March, 1924, vol. 5, pp. 136-7. 300 w.

551.46 **Research to Bare Secrets of Gulf of Mexico.** *Compressed Air Magazine,* January, 1925, vol. 30, p. 1118. 150 w.

HEATING AND VENTILATING

697 **Future of Research Laboratory and Proposed Code on Heating and Ventilation Take First Place at Heating Engineers' Convention.** *Heating and Ventilating Magazine,* February, 1924, vol. 21, pp. 71-4, 79-83. 3500 w.

697 **Heating and Ventilating Engineers.** A. H. BARKER. *Gas World,* Feb. 14, 1925, vol. 82, p. 110. 1000 w.

697 **Research Into Problems of Ventilation.** *Iron and Coal Trade Review,* April 11, 1924, vol. 108, pp. 601-2. Serial. 2200 w.

697 **Research Work of the Institution of Heating and Ventilating Engineers, Its Past, Present and Future.** E. HERRING. *Domestic Engineering,* London, July, 1924, vol. 44, pp. 143-6. 4000 w.

697 **Research Laboratory Goes On.** *Heating and Ventilating Magazine,* February, 1925, vol. 22, pp. 69-77. 5500 w.

697 **Research of the A. S. H. and V. E.** *Domestic Engineering,* Feb. 21, 1925, vol. 110, pp. 21-4. 2300 w.

697 **Research Residence Dedicated.** *Journal American Society Heating and Ventilating Engineers,* January, 1925, vol. 31, pp. 71-2. 200 w.

697 **Warm Air Furnace Manufacturers Get First Data from Heating Research Residence.** *Heating and Ventilating Magazine,* May, 1925, vol. 22, pp. 81-2. 1800 w.

697 **Warm-Air Furnace Men Dedicate Their Heating Research Residence.** *Heating and Ventilating Magazine,* January, 1925, vol. 22, pp. 69-72. 5000 w.

697 **Warm-Air Heating Research Residence.** *Asbestos,* February, 1925, vol. 6, p. 18. 200 w.

697 **Warm-Air Research Building Dedicated.** *Domestic Engineering,* Dec. 20, 1924, vol. 109, p. 31. 500 w.

HIGHWAY

625.7 **Apparatus Used in Highway Research Projects in the United States.** C. A. HOGENTOGLER. *Bulletin, National Research Council,* August, 1923, vol. 6, 91 pp.

625.7 **Benefits of Highway Research Discussed.** *Canadian Engineer,* Jan. 20, 1925, vol. 48, pp. 147-8. 1800 w.

625.7 **Demand for Practical Highway Research Is Growing.** *Automotive Industries,* Nov. 15, 1923, vol. 49, pp. 1008-9. 1500 w.

625.7 **Fourth Annual Meeting of the Highway Research Board.** J. L. HARRISON, *Highway Engineer and Contractor,* February, 1925, vol. 12, pp. 55-8. 3600 w; *Engineering World,* March, 1925, vol. 26, pp. 175-6. 1600 w.

625.7 **Highway Research.** W. K. HATT. *Cornell Civil Engineer,* October, 1923, vol. 32, pp. 6, VII, and IX. 1200 w.

625.7 **Highway Research.** J. L. HARRISON. *Engineering and Contracting* (*Roads and Streets*), Feb. 4, 1925, vol. 63, pp. 263-8. 2000 w.

625.7 **Highway Research Board Adds Contact Men.** *Pit and Quarry,* May 1, 1925, vol. 10, p. 90. 300 w.

625.7 **Highway Research Board Holds Fourth Annual Meeting.** *Pit and Quarry,* Dec. 15, 1924, vol. 9, pp. 85-6. 700 w.

625.7 **Highway Research Board Organized.** *Engineering and Contracting,* Sept. 3, 1924, vol. 62, pp. 494-5. 200 w.

625.7 **Highway Research Board Proceedings.** J. L. HARRISON. *Public Roads,* January, 1925, vol. 5, pp. 5-8. 3800 w.

625.84 **Highway Research Board to Study Concrete Reinforcement.** *Public Roads,* October, 1924, vol. 5, p. 19. 300 w.

625.7 **Highway Research Board to Have New Contacts.** *Public Roads,* December, 1924, vol. 5, p. 15. 100 w.

625.7 **Highway Research in Illinois.** C. OLDER. *Proceedings American Society Civil Engineers,* February, 1924, vol. 50, pp. 175-217.

625.7 **Highway Research in Illinois.** H. F. CLEMMER. *Proceedings American Society Civil Engineers,* August, 1924, vol. 50, pp. 851-2. Discussion. 500 w.

625.7 **Highway Research to Insure Better Roads.** *Manufacturers' Record,* Jan. 1, 1925, vol. 87, p. 97. 400 w.

625.7 **Inception and General Description of Highway Research at Pittsburg, Cal.** *Surveyor,* November, 1923, vol. 34, pp. 125-61.

625.7 **Investigation of Road Surfacing Materials.** *Surveyor,* London, Feb. 20, 1925, vol. 67, p. 229.

625.7 **New Type of Road Sought by Highway Research Council.** *Highway Engineer and Contractor,* December, 1924, vol. 11, p. 42. 500 w.

625.7 **Progress Report on Walkways Research.** *Safety Engineering,* March, 1925, vol. 49, pp. 125-6, and 139. 1000 w.

625.7 **Recent Conclusions in Highway Research.** A. T. GOLDBECK. *Public Roads, January,* 1925, vol. 5, pp. 9-14. 5500 w.

625.84 **Reinforced Concrete Pavement Survey.** C. A. HOGENTOGLER. *Public Roads,* February, 1925, vol. 5, p. 19. 500 w; *Engineering and Contracting* (*Roads and Streets*), April 1, 1925, vol. 63, p. 692. 300 w.

625.7 **Report of Advisory Board on Highway Research.** E. R. OLBRICH. *Highway Engineer and Contractor,* December, 1923, vol. 9, pp. 35-8. 2500 w.

625.7 **Research an Important Factor in Highway Improvement.** W. K. HATT. *Journal Society Automotive Engineers,* December, 1923, vol. 13, pp. 495-6 and 510. 1700 w.

625.7 **Research Council to Study Pavement Reinforcing.** *Engineering and Contracting,* Sept. 3, 1924, vol. 62, p. 550. 200 w.

625.7 **Research in Material and Design Cuts Costs of Highway Construction.** T. H. MACDONALD and G. M. HENDRICKS. *Highway Magazine,* January, 1925, vol. 15, pp. 3-5. 500 w.

625.7 **Research Looking to Improvement in Asphalt Mixtures.** P. HUBBARD. *Engineering World,* March, 1925, vol. 26, pp. 154-8. 3700 w.

625.7 **Research on Road Reinforcement to Start.** *Good Roads,* October, 1924, vol. 67, p. 116. 500 w.

625.7 **Research Work on Semi-gravel, Top Soil and Sand Clay, and Other Road Materials in Georgia.** C. M. STRAHAN. *Bulletin University of Georgia,* June, 1922, vol. 22, 35 pp.

625.8 **Research Work to Improve Asphalt Paving Mixtures.** P. HUBBARD. *Municipal and County Engineering,* December, 1924, vol. 67, pp. 282-9. 400 w.

625.7 **Researches on the Structural Design of Highways by the United States Bureau of Public Roads.** A. T. GOLDBECK. *Proceedings American Society Civil Engineers,* April, 1924, vol. 50, pp. 453-89.

625.85 **Sheet Asphalt Mixture Research.** H. W. SKIDMORE. *Engineering and Contracting* (*Roads and Streets*), April 1, 1925, vol. 63, pp. 693-700. 2200 w.

625.7 **Some American Highway Research Reports.** *Surveyor,* London, July 25, 1924, vol. 66, p. 87. 700 w.

625.7 **Some Recent Developments in Highway Research.** G. E. HAMLIN. *Engineering News Record,* Dec. 11, 1924, vol. 93, pp. 957-9. 1000 w.

625.7 **What Contractors Are Doing in Highway Research.** *Engineering and Contracting* (*Roads and Streets*), Dec. 5, 1923, vol. 60, pp. 1196-7. 1000 w.

ILLUMINATION

628.9 **Coordination of Research in Illuminating Engineering and Some Practical Applications.** J. S. Dow. With discussion. *Illuminating Engineer,* January-March, 1924, vol. 17, pp. 6-18.

622.47 **Illumination Research on Coal Mines.** C. H. S. TUPHOLME. *Coal Industry,* November, 1923, vol. 6, pp. 475-7. 2000 w.

622.47 **Record of Research on the Testing of Wire Gauzes in Currents of Explosive Mixtures.** *Miners' Lamps Committee.* Memorandum No. 8, London, 1923. 8 pp.

628.9 **Research in Illuminating Engineering.** J. S. Dow. *Electrician,* Feb. 15, 1924, vol. 92, p. 197. 600 w.

621.32 **Research on Illumination.** J. S. Dow. *Electricity,* Feb. 1, 1924, vol. 38, p. 55. 500 w.

628.9 **Research Problems.** E. F. NICHOLS. *Transactions Illuminating Engineering Society,* February, 1924, vol. 19, pp. 125-34.

LEATHER

675 **Applied Research Pays Dividends in Leather Manufacture.** A. G. WIKOFF. *Chemical and Metallurgical Engineering,* June 9, 1924, vol. 30, pp. 896-901. 3100 w.

675 **Leather Research in America.** *Chemical Engineering and Mining Review,* March 5, 1925, vol. 17, p. 239. 300 w.

675 **Leather Research in America.** G. KNIBBS. *Industrial Australian and Mining Standard,* March 5, 1925, vol. 73, p. 314. 300 w.

675 **New Leather Research Laboratory at the University of Cincinnati.** R. W. GRIFFITH. *Journal American Leather Chemists' Association,* January, 1925, vol. 20, pp. 4-9. 1900 w.

675 **Practice, Theory and Need of Research in Sole Leather Tanning.** W. R. COX. *Journal American Leather Chemists' Association,* December, 1924, vol. 19, pp. 716-31.

675 **Research on Industrial Investment.** H. E. HOWE. *Journal American Leather Chemists' Association,* September, 1923, vol. 18, pp. 465-75.

675 **Tanning Research Laboratory at the University of Cincinnati** W. D. HARKINS. *Science,* Dec. 12, 1924, vol. 60, pp. 543-4. 500 w.

LUBRICATION

621.89 **Bearing Metal Research.** *Machinery,* N. Y., March, 1924, vol. 30, p. 513. 700 w.

621.89 **Economics of Lubrication—Suggestions for a Research Program.** W. F. PARISH. *National Petroleum News,* May 7, 1924, vol. 16, p. 59. 500 w.

621.89 **Lubrication Experiments Cause Debate.** H. D. NICKINSON. *Oil and Gas Journal,* Jan. 31, 1924, vol. 23, pp. 112-13, 150, 152, 154 and 156. 5000 w.

621.89 **Problems of Lubrication Research.** M. D. HERNEY. *Journal American Society Naval Engineers,* November, 1923, vol. 35, pp. 648-74.

621.89 **Research Reveals Laws of Friction in Lubricated Bearings.** P. M. HELDT. *Automotive Industries,* Oct. 11, 1923, vol. 49, pp. 735-9. 3800 w.

621.89 **Some Bearing Investigations.** E. G. GILSON, *General Electric Review,* May, 1924, vol. 27, pp. 318-27. 3000 w.

MACHINE TOOLS

621.93 **Cutting Tools Research.** T. E. STANTON and J. H. HYDE. *Engineering,* Jan. 30, 1925, vol. 119, pp. 148-50. 1800 w; Feb. 13, 1925, vol. 119, pp. 192-3. 2100 w; *Machinery,* London, Feb. 5, 1925, vol. 25, p. 589. 850 w.

621.93 **Cutting Tools Research.** W. ROSENHAIN and A. C. STURNEY. *Engineering,* Jan. 30, 1925, vol. 119, pp. 151-2. Serial. 1000 w; Feb. 6, 1925, vol. 119, pp. 178-9. 1800 w; *Machinery,* London, Feb. 12, 1925, vol. 25, pp. 627-9. 1800 w. Serial.

621.93 **Research in the Art of Cutting Metals.** O. W. BOSTON. *Michigan Technic,* January, 1925, vol. 38, pp. 11-14, 28. 3000 w.

621.83 **Research on the Strength of Gear Teeth.** *Machinery,* N. Y., February, 1925, vol. 31, p. 453. 250 w.

621.852 **Research on Use of Leather Belting.** R. F. JONES. *Iron Age,* March 5, 1925, vol. 115, pp. 708-10. 1700 w.

621.852 **Summary of Research on the Applications of Leather Belting.** R. F. JONES, *National Engineer,* April, 1925, vol. 29, pp. 176-8. 1500 w. Serial; May, 1925, vol. 29, pp. 215-18. 1600 w.

MARINE ENGINEERING

629.12 **Die Hamburgische Schiffbau-Versuchsanstalt.** (Hamburg shipbuilding research equipment). PETZCH. *Verkenhrstechnik,* Dec. 26, 1924, vol. 41, pp. 691-4. 700 w.

629.12 **Progress in Marine Propulsion During the Last Ten Years and Some of Its Possibilities.** A. C. Ross. *Shipbuilding and Shipping Record,* July 3, 1924, vol. 24, pp. 6-7. 1600 w.

629.12 **Speed and Power Research.** *Shopbuilder,* December, 1923, vol. 29, pp. 265-6. 1000 w.

METALLURGY

669 **Active Metallurgical Research.** H. W. Gillett. *Iron Age,* Aug. 27, 1925, vol. 116, pp. 536-42. 3500 w.

669.1622 **American Blast Furnace Research.** *Iron and Coal Trade Review,* March 6, 1925, vol. 110, pp. 388-9. 2000 w.

669.1622 **Blast Furnace Progress.** J. A. Mohr. *Blast Furnace and Steel Plant,* January, 1924, vol. 12, pp. 8-12. 3800 w.

669.1622 **Blast Furnace Progress in 1924.** H. E. McDonnell. *Blast Furnace and Steel Plant,* February, 1925, vol. 13, pp. 66-9 and 72. 3300 w.

669.1622 **Blast Furnace Research in U. S. A.** *Mining Journal,* Aug. 23, 1924, vol. 146, p. 693. 300 w.

669 **Carnegie Institute Establishes Research Bureau of Metallurgy.** *Welding Engineer,* July, 1924, vol. 9, p. 25. 1300 w.

669 **Colorado Experimental Plant for Metallurgical Research.** *Mountain States Mining Age,* December, 1923, vol. 8, pp. 9 and 34. 400 w.

669 **Cutting Tools Research.** *Machinery,* London, Feb. 5, 1925, vol. 25, p. 589. 850 w.

669 **Cutting Tools Research.** T. E. Stanton and J. H. Hyde. *Engineering,* Jan. 30, 1925, vol. 119, pp. 148-50. 1800 w.

669 **Cutting Tools Research.** W. Rosenhain and A. C. Sturney. *Engineering,* Jan. 30, 1925, vol. 119, pp. 151-2. 1000 w. Serial; Feb. 6, 1925, vol. 119, pp. 178-9. 1800 w; *Machinery,* London, Feb. 12, 1925, vol. 25, pp. 627-9. 1800 w. Serial.

669 **Entwicklung und moegliche Ziele der metallkundlichen Forschung.** (Development and aims of metallurgical research) F. Sauerwald. *Zeitschrift fuer Metallkunde,* July, 1923, vol. 15, pp. 184-90. 4000 w.

669 **Fellowships in Mining and Metallurgical Research.** *Iron Age,* March 19, 1925, vol. 115, p. 831. 500 w.

669.1 **Ferrous Alloys Research.** W. Rosenhain and others. *Iron and Coal Trade Review,* Sept. 5, 1924, vol. 109, pp. 378-82. 5000 w. Abstract from Iron and Steel Institute, Advance Proof, September, 1924. 43 pp.

669 **German Metal Research Society.** Abstract of papers. H. Hermanns. *Metal Industry,* London, Nov. 16, 1923, vol. 23, pp. 439-40. 1500 w.

620-12 **Hardness Tests Research.** G. A. Shires and others. *Iron and Coal Trade Review,* May 1, 1925, vol. 110, pp. 691-2. 2200 w.

669 **International Cooperation in Metallurgical Research.** *Engineering World,* April, 1925, vol. 26, p. 223. 200 w.

669 **Joint Conference of Standards and Research Committee of the A. E. S.** *Brass World,* January, 1925, vol. 21, pp. 24-5. 1700 w.

669.1 **L'économie de combustibles dans une grande usine siderurgique.** (Fuel economy in a large iron works.) *Bulletin des Associations Francaises de Propriétaires d'Appareils à Vapeur No.* 14, October, 1923, vol. 4, pp. 235-42.

669 **Le laboratoire moderne d'essais des produits metallurgiques.** (Modern laboratory for testing metallurgical products.) L'Guillet. *Technique Moderne,* Jan. 1, 1924, vol. 16, pp. 1-7. 5500 w.

669 **Metallurgical Research.** T. Turner. *Engineer,* March 14, 1924, vol. 137, pp. 276-7. 1600 w.

669 **Metallurgical Research at Carnegie Tech.** *Forging-Stamping-Heat Treating,* August, 1924, vol. 10, p. 288. 300 w.

669 **Metallurgical Research at the Royal Mint.** T. K. Ross. *South African Engineering,* November, 1924, vol. 35, p. 230. 800 w.

669 **Metallurgical Research in England.** W. Rosenhain. *Iron Age,* April 2, 1925, vol. 115, pp. 975-8. 2000 w; *Iron Age,* April 16, 1925, vol. 115, pp. 1129-31. 1600 w.

669 **Metallurgical Research in Government Laboratories.** J. L. Haughton. *Empire Mining and Metallurgy Congress. Advance Proof,* Section D., June 3-6, 1924. 19 pp.

669 **Metallurgical Research in Utah.** *Canadian Mining Journal,* April 18, 1924, vol. 45, p. 373. 300 w.

669 **Metallurgical Research Work at the National Physical Laboratory.** *Iron and Coal Trade Review,* June 29, 1923, vol. 106, p. 978. 1500 w.

669 **Metallkunde und physikalische Forschung.** (Metallurgy and physical research.) J. Czochralski *Zeitschrift fuer Metallkunde,* January, 1925, vol. 17, pp. 1-11. 1200 w.

669. **Methodes de recherche et de controle dans la metallurgie de precision.** (Research and control methods in exact metallurgy.) P. Chevenard. *Memoirs Société Ingenieurs Civils de France,* July-September, 1923, vol. 76, pp. 932-72.

669.2 **Non-ferrous Metals Research.** *Chemical Trade Journal and Chemical Engineer,* March 13, 1925, vol. 76, p. 332. 225 w.

669.2—**Non-ferrous Metals Research.** *Gas Journal,* March 11, 1925, vol. 169, p. 613. 150 w; *Railway Engineer,* April, 1925, vol. 46, p. 123. 600 w.

669.2 **Non-ferrous Metals Research Association.** *Foundry Trade Journal,* April 9, 1925, vol. 31, p. 300. 700 w.

669.2 **Non-ferrous Research.** *Mechanical World,* March 13, 1925, vol. 77, p. 161. 300 w.

669.2 **Progress in Cooperative Research.** *Metal Industry,* London, March 6, 1925, vol. 26, pp. 237-8. 1100 w.

669.5 **Progress in Treatment of Complex Lead-Zinc Ores Encourages Metallurgists.** *Engineering and Mining Journal Press,* March 8, 1924, vol. 117, p. 418.

669 **Prospects of the Research Institute for Iron, Steel and Other Metals.** *Tohoku Imperial University.* 41 pp.

53 **Pure Science and Metallurgy.** T. J. Murray *Metal Industry,* London, Jan. 25, 1924, vol. 24, p. 76. 900 w.

669.1 **Relation of Oxyen to Iron.** *Chemical Age,* London, Sept. 13, 1924, vol. 11, p. 265. 300 w.

669.3 **Research and Power.** *Power Plant Engineering,* Aug. 15, 1925, vol. 29, p. 866. 500 w.

669. **Research Bureau of Metallurgy at the Carnegie Institute of Technology.** *Science,* July 25, 1924, vol. 60, pp. 76-7. 300 w.

669.112 **Research Concerning Quenching Media.** *Automotive Industries,* Dec. 18, 1924, vol. 51, p. 1044. 200 w.

669 **Research Fellowships in Metallurgy and Mining Offered.** *Journal Western Society of Engineers,* March, 1925, vol. 30, pp. 42-3. 200 w.

669.24 **Research in Industry. The Development of the Mond Nickel Process.** C. V. Corless. *Chemical Age,* London, June 16, 1923, vol. 8, pp. 646-7. 1500 w.

669.2 **Research in the Non-Ferrous Industry.** *Brass World,* December, 1923, vol. 19, pp. 400-2. 2500 w.

669.1622 **Research Method for Blast Furnaces.** W. G. IMHOFF and D. E. ACKERMAN. *Iron Age,* Jan. 15, 1925, vol. 115, pp. 203-11. 2000 w.

669.2 **Research on Metals.** *Chemical Trade Journal and Chemical Engineer,* April 10, 1925, vol. 76, p. 455. 200 w.

666.95 **Research Work to Determine Composition of Slag.** R. S. MCCAFFERY. *Iron Trade Review,* Oct. 30, 1924, vol. 75, pp. 1161-2. 1000 w.

669 **Scientific Methods in Metallurgy.** A. G. C. GWYER. *Metal Industry,* London, Nov. 2, 1923, vol. 23, p. 392. 800 w.

669.2 **Scope and Progress of Non-Ferrous Foundry Research.** *Foundry Trade Journal,* March 5, 1925, vol. 31, pp. 195-6. 1100 w.

669 **Some Research Achievements of 1923.** W. SPRAGEN. *American Machinist,* Jan. 17, 1924, vol. 60, pp. 76-7. 600 w.

669 **Special Research Bureau of Metallurgy.** *American Zinc, Lead and Copper Journal,* August, 1924, vol. 15, pp. 8-9. 400 w.

669 **To Study Metals at High and Low Temperatures.** *Iron Trade Review,* Jan. 29, 1925, vol. 76, p. 350. 200 w.

669 **U. S. Bureau of Mines Assigns Subjects for Metallurgical Research.** *Engineering and Mining Journal Press,* Oct. 25, 1924, vol. 118, p. 665. 600 w.

METALS—IRON AND STEEL

669.02 **Application of X-Rays to Steel Casting Manufacture.** *Research Group News,* April, 1925, vol. 2, pp. 3-6. 1000 w.

669.1 **British Cast Iron Research Association.** *Metal Industry,* London, Feb. 1, 1924, vol. 24, pp. 108-9. 400 w; *Foundry Trade Journal,* March 27, 1924, vol. 29, p. 248. 500 w; *Foundry Trade Journal,* Nov. 20, 1924, vol. 30, p. 432 and 450. 1700 w.

669.1 **British Cast Iron Research Association: Its Present Work and Future Development.** J. G. PEARCE. *Empire Mining and Metallurgy Congress. Advance Proof.* Section C, June 3-6, 1924. 14 pp; *Foundry Trade Journal,* July 10, 1924, vol. 30, pp. 28-31. 4000 w.

669.1 **British Cast Iron Research Association Laboratories.** *Foundry Trade Journal,* July 24, 1924, vol. 30, p. 66. 260 w.

669.1 **Cast Iron Research.** *Electrician,* Aug. 1, 1924, vol. 93, p. 135. 200 w.

620.123 **Fatigue in Metals Investigated.** *Canadian Engineer,* June 10, 1924, vol. 46, p. 599. 700 w.

669.1 **Future Improvement of Cast Iron.** J. G. PEARCE. *Foundry Trade Journal,* Feb. 26, 1925, vol. 31, pp. 181-3. 3500 w.

6(072) **Industrial Research.** *Ironmonger,* March 1, 1924, vol. 179, p. 77. 400 w.

622.341 **Recent Researches on Utilization of Canadian Iron Ores.** *Canadian Chemistry and Metallurgy,* March, 1924, vol. 8, p. 71. 400 w.

621.944 **Recherches experimentales sur le laminage du fer a chaud.** (Experimental researches on the rolling of iron.) N. METZ. *Revue de Metallurgie,* January, 1925, pp. 1-20. Serial; February, 1925, pp. 66-87.

669.112 **Recherches sur la faculte de trempe de l'acier extra-foux a tres haute température.** (Researches on heat treating extra soft steel at very high temperature). SAUVAGEOT and H. DELMAS. *Revue de Metallurgie,* December, 1923, vol. 20, pp. 777-95.

669.1 **Recherche sur les aciers à coupe rapide avec et sans cobalt.** (Research on high speed with and without cobalt.) M. K. SASAGAWA. *Revue de Métallurgie,* Feb. 2, 1925, pp. 92-106.

669.14 **Research Reveals Properties of Steels Used for Gages.** *Automotive Industries,* April 3, 1924, vol. 50, pp. 759-60. 2000 w.

669.1 **Research Work in Industry with Special Reference to the British Cast Iron Research Association.** J. G. PEARCE. *Iron and Coal Trade Review,* Aug. 1, 1924, vol. 109, pp. 202-3. 2350 w.

620.12 **Some Recent Research in Connection with Hardness Tests on Metals.** *Railway Engineer,* June, 1923, vol. 44, p. 217. 1000 w.

669.14 **Steel and Research.** E. G. GRACE. *Chemical Age,* New York, September, 1923, vol. 31, p. 425. 800 w.

620.123 **Studying the Fatigue of Metals.** H. F. MOORE. *American Machinist,* April 9, 1925, vol. 62, pp. 563-5. 1100 w.

669.112 **Twelfth Progress Report Gage Steel Investigations.** *Communication No.* 19, *Gage Steel Committee, Bureau of Standards,* Jan. 15, 1925, 17 pp.

699.1 **Wissenschaftliche Forschung in der Eisenindustrie.** (Research in the iron industry). P. GOERENS. *Stahl und Eisen,* Sept. 13, 1923, vol. 43, pp. 1191-8. 3500 w.

669.1 **Work of the British Cast Iron Research Association.** *American Metal Market,* Sept. 10, 1924, vol. 31, pp. 3 and 11. 2200 w.

METALS—NON-FERROUS

669.3 **Copper and Brass Research Shows Trade Association Value.** *Arizona Mining Journal,* Oct. 1, 1924, vol. 8, pp. 38-9. 1000 w.

621.37 **Electro-Plating Research.** W. BLUM. *Metal Industry,* New York, September, 1923, vol. 21, p. 363. 1000 w; April, 1924, vol. 22, p. 154. 500 w.

621.37 **Plating Investigations.** *Metal Industry,* New York, September, 1924, vol. 22, pp. 360-1. 1200 w.

621.37 **Quality of Nickel Finish Is Improved by Packard Researches.** *Automotive Industries,* March 20, 1924, vol. 50, pp. 676-78. 1800 w.

669.71 **Recherches faites au laboratoire central d'electricite sur les proprietés de l'aluminium.** (Research at the Central Electrical Laboratory on the properties of aluminum.) M. JOUAST. *Bulletin Société Francaise d'Electriciens,* December, 1923, vol. 3, pp. 663-9. 2000 w.

669.3 **Researches Affecting Copper and Brass.** W. H. BASSETT. *Mining and Metallurgy,* February, 1924, vol. 5, pp. 73-5. 2600 w.

669.71 **Researching Aluminum.** *Brass World,* August, 1923, vol. 19, pp. 263-4. 1500 w. Abstract of articles by Dr. Ing. Hanzel.

669.718 **Résumé des recherches de Edwin Dudley Martin relatives au recouvrement des alliages ferreux par l'aliminium suivi de quelques remarques à leur sujet.** (Resume of Edward Dudley Martin's researches on the covering iron alloys with aluminum; followed by some remarks on the subject.) J. COURNOT. *Revue de Metallurgie,* March, 1925, pp. 139-53.

669.22 **Silver Research.** *Industrial and Engineering Chemistry,* April, 1924, vol. 16, p. 334. 250 w.

658.7 **Some experiences in Cooperation Between Finishing Departments and the Research Department.** J. L. CHRISTIE. *Brass World,* February, 1925, vol. 21, pp. 66-7. 1750 w.

622.3421 **To Utilize Low Grade Zinc Ores.** *American Zinc, Lead and Copper Journal,* March, 1924, vol. 14, p. 4. 600 w.

669.2 **Trend of Research in the Non-Ferrous Industry.** P. D. MERICA. *Industrial and Engineering Chemistry,* September, 1923, vol. 15, pp. 895-7. 3000 w.

669.3 **Work of Copper Research Association.** G. A. SLOAN. *Sheet Metal Worker,* April 25, 1924, vol. 15, pp. 246-7. 2500 w.

MINING

622 **British and U. S. Mining Engineers to Cooperate.** *National Safety News,* March, 1924, vol. 9, p. 35. 300 w.

622.81 **Coal-Dust Investigations.** G. S. RICE. *Iron and Coal Trade Review,* March 13, 1925, vol. 110, pp. 430-1. 300 w.

622 **Complex Sulphide Ores Are Subject to Investigation.** *Arizona Mining Journal,* Oct. 1, 1924, vol. 8, p. 24. 400 w.

622 **Discussion on Research in Mining.** H. E. T. HAULTAIN. *Bulletin Canadian Mining Institute,* No. 145, pp. 336-7, May, 1924. 900 w.

622 **Fellowships in Mining and Metallurgical Research.** *Iron Age,* March, 1925, vol. 115, p. 831. 500 w.

622.8 **First Report of the Safety in Mines Research Board. 1921-1922.** *Great Britain Mines Department,* 1923, London, 35 pp.

622.1 **Immediate Need of Geological Research Work That Will Aid Prospectors in Finding New Mines.** *Salt Lake Mining Review,* June 30, 1924, vol. 26, pp. 11-15. 2000 w.

622.3 **Institute for Geological Research.** *Engineering and Mining Journal Press,* Sept. 13, 1924, vol. 118, p. 401. 600 w. Editorial.

622.81 **Les experiences Americaines sur les inflammation de poussieres.** (American experiments on dust explosions.) E. AUDIBERT. *Annales des Mines,* January, 1924, vol. 5, pp. 5-63.

6(072) **Mechanical Engineering Activities of the U. S. Bureau of Mines.** H. W. BROOKS. *National Electric Light Association Bulletin,* June, 1924, vol. 11, pp. 382-4. 1500 w.

622.8 **Mine Rescue Apparatus Research Committee's Final Report.** *Colliery Guardian,* March 14, 1924, vol. 127, p. 676. 1200 w.

622.4 **Mine Ventilation Research.** *Colliery Guardian,* April 17, 1924, vol. 127, pp. 992-3. 3000 w.

622.4 **Mine Ventilation Research.** *Colliery Guardian,* April 25, 1924, vol. 127, pp. 1056-7. 2600 w.; May 9, 1924, vol. 127, pp. 1192-3. 2200 w.

622 **Mining East of Ogden, Utah, Indicates Big Possibilities for Research Work.** D. MAGUIRE. *Salt Lake Mining Review,* March 15, 1924, vol. 25, pp. 13-15. 1800 w.

622 **Mining Laboratories in South Wales.** *Colliery Guardian,* Dec. 12, 1924, vol. 128, p. 1501. 500 w.

622 **Mining Research.** *Iron and Coal Trade Review,* Jan. 16, 1925, vol. 110, p. 91. 500 w.; *Colliery Engineering,* February, 1925, vol. 2, pp. 50-1. 480 w.; *South African Mining Journal,* Feb. 28, 1925, vol. 35, p. 674.

622 **Mining Research at Birmingham.** *Chemical Age,* London, Jan. 31, 1925, vol. 12, p. 113.

622 **Mining Research Chemistry.** *Gas Journal,* London, Jan. 28, 1925, vol. 169, p. 194. 200 w.

622.3421 **Practical Research Work on Rand Mines.** *South African Mining Journal,* Aug. 25, 1923, vol. 34, pp. 724-6. 3000 w.

622 **Progress in Mining Technique.** D. Adam. *Colliery Engineering,* July, 1924, vol. 1, pp. 210-12. 1400 w.

622.8 **Report of the Safety in Mines Research Board.** *Colliery Guardian,* Aug. 1, 1924, vol. 128, p. 295. 700 w.

622.3421 **Research and Gold Mining.** *South African Mining Journal,* July 7, 1923, vol. 34, p. 528. 800 w.

622 **Research Fellowships in Metallurgy and Mining Offered.** *Journal Western Society of Engineers,* March, 1925, vol. 30, pp. 42-3. 200 w.

622 **Research in Mining.** H. E. T. Haultain. *Bulletin Canadian Mining Institute,* April, 1924, No. 144, pp. 238-41. 1600 w.

622.4 **Research Into Problems of Ventilation.** *Iron and Coal Trade Review,* April 18, 1924, vol. 108, p. 634. 1800 w.

622 **Research Organization in Africa.** *South African Engineering,* October, 1923, vol. 34, pp. 197-8. 1000 w.

622 **Research Work at Birmingham.** *Colliery Guardian,* Jan. 30, 1925, vol. 129, pp. 269-71. 2500 w.

622.8 **Researches on Safety Problems in Mining.** E. Troup and others. *Colliery Guardian,* June 6, 1924, vol. 127, pp. 1441-45. 4000 w.; *Empire Mining and Metallurgical Congress, Advance Proof,* Section A, June 3-6, 1924, 104 pp.; *Iron and Coal Trade Review,* June 13, 1924, vol. 108, pp. 1016-23; *Transactions Institution of Mining Engineers,* April, 1925, vol. 68, pp. 447-52.

622.8 **Safety in Mines and the Research Work of the United States Bureau of Mines.** G. S. Rice. *Transactions Institution of Mining Engineers,* Part 2, November, 1923, vol. 66, pp. 79-84. 3200 w.

622.8 **Safety in Mines Research.** *Colliery Guardian,* Aug. 8, 1924, vol. 128, pp. 355-6. 1200 w.

622.8 **Safety in Mines Research Board.** *Electrical Review,* Sept. 5, 1924, vol. 95, pp. 352-3. 600 w.; *Iron and Coal Trade Review,* Sept. 14, 1923, vol. 107, pp. 359-61. 6500 w.

622.91 **Some Researches on the Safe Use of Electricity in Coal Mines.** W. M. Thornton. *Electricity,* Feb. 1, 1924, vol. 38, p. 56. 200 w.; *Electrical Review,* Feb. 8, 1924, vol. 94, pp. 231-3. 1300 w. Serial; Feb. 15, 1924, vol. 94, pp. 271-2. 1000 w.; *South African Engineering,* March, 1924, vol. 35, pp. 45-6. 1300 w.; *Journal Institute Electrical Engineers,* June, 1924, vol. 62, pp. 481-514. With discussion.

622.81 **Untersuchungen an Gesteinstaub.** (Research on rock industry). C. Kindermann. Glueckauf, March 28, 1925, vol. 61, pp. 361-4.

622 **U. S. Bureau of Mines Assigns Subjects for Metallurgical Research.** *Engineering and Mining Journal Press,* Oct. 25, 1924, vol. 118 p. 665. 600 w.

ORE DRESSING

622.7 **Experimental Ore Dressing and Metallurgical Plant of the Colorado School of Mines.** S. P. Warren. *Journal Engineering Education,* December, 1924, vol. 15, pp. 252-60.

622.76 **Flotation Research.** C. S. Parsons. *Queensland Government Mining Journal,* July 15, 1924, vol. 25, pp. 247-9. 2600 w.

622.7 **Ore Dressing Research.** *Mining Journal,* March 1, 1924, vol. 144, p. 172. 600 w.

622.7 **Research in Ore Dressing.** *Engineering,* April 17, 1925, vol. 119, p. 490. 900 w.

622.75 **Research in Ore Dressing—Concentration.** E. A. Hersam. *Arizona Mining Journal,* July 1, 1924, vol. 8, pp. 7, 8, 48-51. 2800 w.

622.7 **Research in Ore Dressing—Crushing.** E. A. Hersam. *Arizona Mining Journal,* April 15, 1924, vol. 7, pp. 7, 8, 38-40. 1600 w.

622.7 **Research in Ore Dressing—Fine Grinding.** E. A. Hersam. *Arizona Mining Journal,* May 1, 1924, vol. 7, pp. 7-8. 1600 w.

622.76 **Research in Ore Dressing—Flotation.** E. A. Hersam. *Arizona Mining Journal,* July 15, 1924, vol. 8, pp. 7-8. Serial. 1800 w.

622.7 **Research in Ore Dressing—Introduction.** E. A. Hersam. *Arizona Mining Journal,* April 1, 1924, vol. 7, pp. 7, 8, 16 and 19. 2000 w.

622.7 **Research in Ore Dressing—Miscellaneous.** E. A. Hersam. *Arizona Mining Journal,* Aug. 15, 1924, vol. 8, pp. 7-8. 1500 w.

622.7 **Research in Ore Dressing—Separation.** E. A. Hersam. *Arizona Mining Journal,* June 1, 1924, vol. 8, pp. 11 and 25-6. 1000 w.

622.7 **Status of Research in Ore Dressing.** E. A. Hersam. *Bureau of Mines. Reports of Investigations.* Serial No. 2669, February, 1925, 48 pp.

PAPER

676 **Dominion Paper Interests Aid Government in Research.** *Chemical and Metallurgical Engineering,* May, 1925, vol. 32, p. 525. 100 w.

676 **Madison Laboratory at Work on Problem of Pulping Hard Wood.** *Paper,* Jan. 15, 1925, vol. 35, p. 549. 600 w.

676 **Paper Research of the Bureau of Standards During the Fiscal Year 1923-24.** B. W. Scribner. *Paper Trade Journal,* Jan. 15, 1925, vol. 80, pp. 34-40, 68. 3700 w.

676 **Simplicity in Research.** A. B. Green. *Paper,* April 10, 1924, vol. 33, pp. 6-10. 2500 w.

PHYSICS

53 **British National Physical Laboratory.** *Electrical Engineer,* Jan. 15, 1925, vol. 1, p. 391. 800 w.

532.11 **Certain Aspects of High Pressure Research.** P. W. Bridgman. *Journal Franklin Institute,* August, 1925, vol. 200, pp. 147-160.

53 **Das National Physical Laboratory in Teddington (England).** *Elektrotechnik und Maschinenbau,* Feb. 8, 1925, vol. 43, pp. 107-9. 1100 w.

537.531 **Die Roentgenographische Methode als Hilfsmittel der Chemischen Forschung.** (Roentgen ray as an aid in chemical research.) A. REIS. *Zeitschrift fur Angewandte Chemie,* March 19, 1925, vol. 38, pp. 249-51. 1100 w.

537.4 **Electric Thunderstorm Field Researches.** H. NORINDER. *Electrical World,* Feb. 2, 1924, vol. 83, pp. 223-6. 2000 w.

537.531 **Hunting Ills With the X-Ray.** V. E. HILLMAN. *Foundry,* March 15, 1924, vol. 52, pp. 213-6. 2000 w.

532.5 **Hearing Before a Subcommittee of the Committee on Commerce. To Establish a National Laboratory.** *United States Senate.* 68th Congress. 1st Session. Pursuant to Senate Joint Resolution, 42. Washington. Government Printing Office. May 21, 1924, 90 pp.; 2nd Session. Pursuant to Senate Joint Resolution, 209. Sept. 8, 1922, 60 pp.; 4th Session. Pursuant to Senate Joint Resolution, 209. Part 2, Jan. 10, 1923, 85 pp.

53 **Influence of Industrial Research on Progress in Physics.** C. A. PARSONS. *Electrical Review,* June 27, 1924, vol. 94, p. 1039. 500 w.

53 **Le National Physical Laboratory ou Laboratoire National Britannique de Teddington, pres de Londres.** (National Physical Laboratory at Teddington.) H. STROH. *Genie Civil,* Nov. 8, 1924, vol. 85, pp. 413-19. 4900 w.

53 **National Physical Laboratory.** *Iron and Coal Trade Review,* June 22, 1923, vol. 106, p. 943. 2000 w.

537.531 **Recenti Ricerche sui Raggi X.** (Recent researches on the X-ray.) *L'elettricista,* March 1, 1925, vol. 34, pp. 34-6. 2000 w.

536.2 **Research in Heat Transmission.** *Power,* June 10, 1924, vol. 59, p. 952. 600 w.

536.2 **Research in Heat Transmission.** E. BUCKINGHAM. *Mechanical Engineering,* July, 1924, vol. 46, pp. 386-8. 2800 w.; *Refrigerating-Engineering,* September, 1924, vol. 11, pp. 91-4. 3600 w.; *Mechanical World,* Oct. 3, 1924, vol. 76, pp. 220-1. 2000 w. Serial; Oct. 10, 1924, vol. 76, pp. 236-7. 1000 w.

537.53 **Recherches sur le Potential Disruptif dans les Gaz Rarefiés.** (Researches on disruptive potential in rarefied gases.) E. DUBOIS. *Annalee de Physique,* September-October, 1923, vol. 20, pp. 113-238.

620.12 **Testing Raw Materials in a Research Laboratory.** *Mining and Oil Bulletin,* July, 1924, vol. 10, pp. 709-15. 1000 w.

537.4 **Thunderstorm Researches Versus No Lightning Arrestors.** E. E. F. CREIGHTON. *Electrical World,* March 15, 1924, vol. 83, pp. 521-23. 2000 w.

53 **Work of the National Physical Laboratory.** F. BROADBENT. *World Power,* October, 1924, vol. 2, pp. 204-9. 4500 w.

PUMPS

621.61 **Experimental Study of Air Lift Pumps and Application of Results to Design.** C. N. WARD. *Bulletin University of Wisconsin,* Serial No. 1265, 1924, vol. 9. 166 pp.

621.64 **Introduction aux Etudes Experimentales Effectues au Laboratoire de Construction de Machines de l'Universite de Liege.** (Experimental studies at the machine laboratory in Liege University). C. HANOCO. *Revue Universale de Mines,* Jan. 15, 1925, vol. 5, pp. 66-72.

RADIO

621.384 **Experimental Transmitting Station of the National Physical Laboratory.** R. L. SMITH-ROSE. *Wireless World,* Jan. 9, 1924, vol. 13, pp. 467-71. 2700 w.

621.384 **Experiments at Southampton. Radio Telephony at Sea.** *Electrical Review,* Feb. 15, 1925, vol. 96, p. 278, 380 w.

621.384 **Radio Communication and Research in Great Britain.** *Nature,* Oct. 4, 1924, vol. 114, p. 520. 500 w.

621.384 **Radio Research Board and Direction Finding. Notes on Wireless Matters.** G. W. O. HOWE. *Electrician,* Feb. 13, 1925, vol. 94, pp. 176 and 181. 1400 w.

621.3846 **Reminiscences of Vacuum Tube Research.** F. S. MCCULLOUGH. *Telegraph and Telephone Age,* Feb. 1, 1924, No. 3, p. 60. 700 w.

REFRIGERATION

621.55 **Recent Developments in Refrigeration Research.** E. GRIFFITHS. *Proceedings British Cold Storage and Ice Association,* 1924-1925, vol. 21, pp. 37-62. 26 pp.

621.55 **Recent Developments in Refrigeration Research.** *Engineering,* Nov. 28, 1924, vol. 118, pp. 742-4. 1000 w.

621.55 **Refrigerating Research.** E. GRIFFITHS. *Cold Storage and Produce Review,* Nov. 20, 1924, vol. 27, pp. 469-74. 2800 w.

621.55 **Refrigeration for Research Work.** S. R. WINTERS. *Ice and Refrigeration,* July, 1924, vol. 67, pp. 14-15. 1500 w.

621.55 **Refrigeration Research.** *Commonwealth Engineer,* Nov. 1, 1924, vol. 12, pp. 146-7. 600 w.

621.57 **Research Graduate Assistantships. University of Illinois.** *Ice and Refrigeration,* February, 1925, vol. 68, p. 117. 300 w.

621.55 **Research Work in Household Refrigeration.** M. L. MATTHEWS. *Ice and Refrigeration,* January, 1925, vol. 68, pp. 63-5. 2100 w.

RESEARCH—GENERAL

6(072) **Baconian Method of Scientific Research.** F. CAJORI. *Scientific Monthly,* January, 1925, vol. 20, pp. 85-91. 2100 w.

62 **British Engineering Progress in 1923.** M. MEREDITH. *National Engineer,* March, 1924, vol. 28, pp. 133-5. 2500 w.

6(072) **Canada's Need of a Research Institute.** C. SIFTON. *Iron and Steel of Canada,* May, 1923, vol. 6, pp. 102-5. 2800 w.

6(072) **Causes and Products of Research.** *Journal Western Society of Engineers,* January, 1925, vol. 30, pp. 8-9. 600 w.

6(072) **Distribution of the Results of Research to Industry.** *Chemical Age,* New York, October, 1924, vol. 32, p. 412. 500 w.

6(072) **Educational Research.** B. T. BALDWIN. *Bureau of Education Bulletin,* No. 42, 1923, 76 pp.

6(072) **Ella Sachs Plotz Foundation for the Advancement of Scientific Investigation.** *Science,* Feb. 27, 1925, vol. 61, pp. 228-9. 500 w.

621.92 **Emphasize Need of Research.** *Abrasive Industry,* May, 1925, vol. 6, p. 140. 500 w.

627.8 **Engineering Foundation Committee on Arch Dams Is Progressing.** *Engineering World,* February, 1924, vol. 24, p. 111. 600 w.

627.8 **Engineering Foundation Committee on Arch Dam Investigation.** F. A. Noetzli. *Engineering World,* February, 1924, vol. 24, p. 113. 400 w.

6(072) **Engineering Foundation Plans to Extend Research.** *Railway Review,* March 7, 1925, vol. 76, pp. 442-3. 440 w.

6(072) **Example of Corporation Research.** *Chemical Age,* New York, September, 1924, vol. 32, p. 376. 500 w.

6(072) **Exclusion of Germany from International Research.** *Chemical Age,* London, June 7, 1924, vol. 10, p. 596. 500 w.

6(072) **Fact Collecting Versus Research.** T. S. Harding. *Chemical Age,* New York, June, 1924, vol. 32, pp. 257-8. 1800 w.

6(072) **Grants of the American Association for the Advancement of Science in Aid of Research.** B. L. Livingston. *Science,* Feb. 20, 1925, vol. 61, p. 202. 400 w.

6(072) **Imperial Aspect of Research.** *Chemical Trade Journal and Chemical Engineer,* Oct. 19, 1923, vol. 73, pp. 449-50. 600 w.

6(072) **Industrial Research, Its National Importance and Its Bearing on the Industrial Development of China.** C. Y. Wang. *Journal Association Chinese and American Engineers,* November, 1924, vol. 5, pp. 3-9. 2800 w.

331 **Industrial Research and Unemployment.** *Gas World,* April 25, 1925, vol. 82, p. 356.

6(072) **Industrial Research in Bengal.** *Chemical Trade Journal and Chemical Engineer,* Jan. 2, 1925, vol. 76, p. 11. 400 w.

6(072) **Invention, Research and the Engineer.** A. Russell. *Machinery Market,* Jan. 30, 1925, pp. 25-26. 1800 w.

6(072) **Institute Organized to Encourage Research.** *Iron Trade Review,* Oct. 30, 1924, vol. 75, p. 1171. 400 w.

6(072) **Manufacturers' Research Organization in Great Britain.** *Indian Industries and Power,* February, 1923, vol. 20, pp. 188-91. 1800 w.

51 **Mathematics in Industrial Research.** A. G. Campbell. *Bell Telephone Quarterly,* October, 1924, vol. 3, pp. 222-31; *Bell System Technical Journal,* October, 1924, vol. 3, pp. 550-7. 3600 w.

6(072) **Meaning of Scientific Research.** M. I. Pupin. *Science,* Jan. 9, 1925, vol. 61, pp. 26-30. 3200 w.

6(072) **Pan Pacific Research Institute.** *Science,* Aug. 29, 1924, vol. 60, pp. 194-5. 350 w.

608 **Patents and Research.** J. Dewrance. *Engineering,* Oct. 26, 1923, vol. 116, pp. 531-2. 2200 w.

658.3 **Personnel Research Federation.** *Mining and Metallurgy,* December, 1924, vol. 5, 576. 930 w; *Mechanical Engineering,* December, 1924, vol. 46, p. 929. 400 w.

656.212 **Planning for the Future.** J. R. Bibbins. *Ports and Waterways,* August, 1924, vol. 1, pp. 69-72. 1700 w.

6(072) **Problems of Industrial Research in Canada.** H. Freeman. *Canadian Chemistry and Metallurgy,* October, 1924, vol. 8, pp. 237-8. 1800 w.

6(072) **Research.** *Engineering,* Oct. 17, 1924, vol. 118, pp. 551-2. 2500 w.

6(072) **Research.** W. R. Ormandy. *Automobile Engineer,* November, 1924, vol. 14, pp. 372-5. 6000 w.

6(072) **Research (Detroit Edison Co.).** C. F. Hirschfeld. *Electric Light and Power,* March, 1925, vol. 3, pp. 23-5. 1500 w.

620.12 **Research Activities of American Society for Testing Materials.** *Iron Age,* July 2, 1925, vol. 116, pp. 26-9. 2700 w.

6(072) **Research—A Mental Attitude.** C. F. Kettering. *Michigan Technic,* May, 1924, vol. 37, pp. 22 and 25. 1100 w.

6(072) **Research as a Career in Engineering.** T. D. Yensen. *Bridge of Eta Kappa Nu,* November, 1924, vol. 21, pp. 3-7. 4500 w.

608 **Research as Related to Patents and Patent Litigation.** H. C. Bierman. *Electrical Journal,* August, 1924, vol. 21, pp. 369-73. 500 w.

6(072) **Research Experiment.** *Industrial and Engineering Chemistry,* November, 1924, vol. 16, p. 1103. 400 w.

62 **Research Graduate Assistantships.** *American Architect,* Jan. 28, 1925, vol. 127, p. 14. 300 w.

622.338 **Research in Micro-Faunas.** *Mining and Metallurgy,* March, 1924, vol. 5, pp. 136-7.

6(072) **Research in the Service of the State.** E. W. Allen. *Science,* Aug. 21, 1925, vol. 62, pp. 165-9. 4400 w.

6(072) **Research Narratives.** A. D. Flinn. *Engineering Journal,* March, 1924, vol. 7, p. 149. 200 w.

6(072) **Research Narratives.** *Iron Age,* March 6, 1924, vol. 113, p. 719. 200 w.

6(072) **Research Spirit in Modern Life.** F. G. Benedict. *Science,* Sept. 5, 1924, vol. 60, pp. 207-14.

6(072) **Research Topics and Suggestions.** *Journal Society Automotive Engineers,* March, 1924, vol. 14, pp. 335-7 and 341. 2800 w.

6(072) **Research Work and Its Applications.** W. Bragg. *Nature,* March 1, 1924, vol. 113, pp. 311-12. 1300 w.

6(072) **Research Work in Washington.** *Natural Gas,* March, 1924, vol. 5, p. 36. 1200 w.

51 **Researches in Engineering Mathematics.** W. F. Dunton. *Beama,* September, 1923, vol. 45, pp. 182-8. Concluded. 3000 w.

6(072) **Science and Progress in Australia.** D. C. Masson. *Nature,* Oct. 6, 1923, vol. 112, pp. 507-10. 3000 w.

6(072) **Scientific and Industrial Research.** *Engineer,* Oct. 3, 1924, vol. 138, pp. 384-5. 1600 w.; *Electrical Review,* Oct. 17, 1924, vol. 95, pp. 593-4. 1500 w.; *Electrician,* Oct. 3, 1924, vol. 93, p. 378. 250 w.; Oct. 10, 1924, vol. 93, p. 403. 300 w.; *Gas Journal,* London, Oct. 22, 1924, vol. 168, p. 225. 900 w.; *Iron and Coal Trade Review,* Oct. 3, 1924, vol. 109, pp. 552-3. 3300 w.; 8th Annual Report, Oct. 12, 1923, vol. 107, pp. 543-4. 3500 w.; *Ship-Builder,* December, 1924, vol. 31, pp. 272-3. 1000 w.; *South African Engineering,* November, 1924, vol. 35, pp. 217-18. 500 w.

6(072) **Scientific and Industrial Research in 1923-1924.** *Chemical Trade Journal and Chemical Engineer,* Oct. 10, 1924, vol. 75, pp. 429-30. 900 w.

6(09) **Scientific Research and Human Welfare.** F. S. Harris. *Macmillan Company,* New York, 1924. 406 pp.

6(072) **Scientific Research. Recent Progress.** *Colliery Guardian,* October, 1923, vol. 126, p. 971. 800 w.

6(072) **Securing Funds for Research.** *Ceramist,* February, 1925, vol. 5, pp. 257-9. 110 w.

6(072) **Simplicity and Directness—The Essentials of Research.** *Chemical and Metallurgical Engineering,* Feb. 9, 1925, vol. 32, p. 321. 400 w.

6(072) **Some Aspects of Engineering Progress.** A. H. STUART. *Model Engineer,* Dec. 27, 1923, vol. 49, pp. 710-12. 3300 w.

6(072) **Some Notes on Practical Research.** *Engineering and Boiler House Review,* March, 1925, vol. 38, pp. 401-2. 850 w.

6(072) **Southern Experiment Station—Its Problem and Purpose.** A. H. HUBBELL. *Engineering and Mining Journal Press,* July 26, 1924, vol. 118, pp. 132-4. 1300 w.

6(072) **Stimulation of Research and Invention.** D. S. JACOBUS. *Mechanical Engineering,* October, 1924, vol. 46, pp. 575-6. 1700 w.; *Journal Franklin Institute,* August, 1925, vol. 200, pp. 249-53. 2800 w.

6(072) **Sur l'Invention et la Recherche Scientifiques.** (Invention and scientific research). G. CLAUDE. *Chimie et Industrie,* May, 1923, vol. 9, pp. 1009-22.

6(072) **Trend and Purpose of Modern Research.** H. E. HOWE. *Journal of Franklin Institute,* February, 1925, vol. 199, pp. 187-202.

6(003) **Two National Services to Industry.** G. K. BURGESS. *American Machinist,* March 20, 1924, vol. 60, pp. 417-19. 2000 w.

6(072) **Valuable Institution, A—Victoria's Technological Museum.** *Industrial Australian and Mining Standard,* Feb. 26, 1925, vol. 73, pp. 281-3.

6(072) **Un projet International de Protection de la Propriete Scientifique.** (International plan for the protection of scientific rights). FERNAND-JOCQ. *Revue Generale Electrique,* Jan. 5, 1924, vol. 15, pp. 35-40. 5000 w.

RESEARCH—GENERAL

Cooperative

6(072) **British Association Has Research Laboratory.** *Iron Trade Review,* Aug. 21, 1924, vol. 75, p. 486. 200 w.

352 **Cooperative Municipal Research.** E. D. GREENMAN. *Special Libraries,* December, 1924, vol. 15, pp. 235-7. 2000 w.

6(072) **Cooperative Research at the Massachusetts Institute of Technology.** G. B. HAVEN. *Tech. Engineering News,* November, 1924, vol. 5, p. 144. 1200 w.

656.2 **Cooperative Research in the Railroad Field.** *Railway Age,* June 23, 1923, vol. 74, pp. 1613-4. 2000 w.

691.2 **Cooperative Research on the Use and Maintenance of Marble for Interior Work.** *American Architect,* April 22, 1925, vol. 127, p. 400. 200 w.

6(072) **Development of Industrial Research Associations.** K. LEE. *Nature,* Dec. 6, 1924, vol. 114, pp. 813-14. 1300 w.

6(072) **Division of Industrial Cooperation and Research. Five Year's of the Technology Plan.** C. L. NORTON. *Technology Review,* December, 1924, vol. 27, pp. 78-81. 3600 w.

6(072) **Industrial Research Associations.** *Mechanical World,* March 6, 1925, vol. 77, p. 145. 400 w.

656.2 **Joint Bureau of Research.** F. E. YOAKUM. *Railway Age,* May 2, 1925, vol. 78, p. 1075. 250 w.

6(072) Many Benefits from Cooperative Research. *Iron Age,* June 19, 1924, vol. 113, pp. 1795-6. 1600 w.

6(072) Reduction of Costs Through Cooperative Research Work. W. J. CORBETT. *Society of Industrial Engineers, September,* 1924, vol. 7, pp. 97-1-4. 3000 w.

6(072) Research Work in Industry With Special Reference to the British Cast Iron Research Association. J. G. PEARCE. *Iron and Coal Trade Review,* Aug. 1, 1924, vol. 109, pp. 202-3. 2350 w.

RESEARCH—GENERAL
Economic

218.91 Economic Research in Tropical Development. W. R. DUNLOP. *Journal Royal Society of Arts,* Feb. 20, 1925, vol. 73, pp. 312-34. With discussion.

621.3156 Our Annual Waste of Research Material. J. B. WHITEHEAD. *Journal American Institute Electrical Engineers,* February, 1925, vol. 44, pp. 140-1. 1800 w.

332 Prizes for Financial Research. *Coal Trade Bulletin,* April 1, 1925, vol. 52, p. 380. 220 w.

6(072) Source Book of Research Data. Edition of 1923. New York University. Bureau of Business Research. 70 pp.

31 Utilization of Statistics. K. H. DAEVES. *Testing,* March, 1924, vol. 1, pp. 173-99.

RESEARCH
In Industry

6(072) Academic Research and Industry. J. T. DUNN. *Chemical Age,* London, Nov. 29, 1924, vol. 11, p. 553. 800 w.

6(072) Apparatus for Industrial Research. *Gas Journal,* Jan. 9, 1924, vol. 165, p. 84. 450 w.

6(072) Business and Science Partners in Research and Development. J. J. CARTY. *Public Service Management,* September, 1924, vol. 37, pp. 70-1. 1300 w.

6(072) Field of Research in Industrial Institutions. E. W. RICE, JR. *General Electric Review,* November, 1924, vol. 27, pp. 720-8. 7000 w.; *Journal Franklin Institute,* January, 1925, vol. 199, pp. 65-81.

6(072) How Corporations Carry on Research. H. A. SCHWARTZ. *Rose Technic,* November, 1923, vol. 33, pp. 3-4 and 20. 3000 w.

658.544 Industrial Fatigue Research Board. *Engineering,* May 4, 1923, vol. 115, pp. 558-9. 1800 w.

6(072) Industrial Research. *Canadian Mining Journal,* March 21, 1924, vol. 45, p. 280. 800 w.

6(072) Industrial Research. L. A. HAWKINS. *American Machinist,* Aug. 27, 1925, vol. 63, pp. 335-8. 3000 w.

6(072) Industrial Research. C. C. PATTERSON. *Electrician,* May 25, 1923, vol. 90, pp. 554-6. 2500 w.

6(072) Industrial Research. C. E. SKINNER. *Journal Western Society of Engineers,* July, 1923, vol. 28, No. 7, pp. 279-92.

6(072) **Industrial Research.** WILSON. *Electrician,* Jan. 4, 1924, vol. 92, p. 7. 600 w.; *Machinery Market,* Jan. 4, 1924, pp. 27-8. Serial. 3600 w.; January 11, 1924, p. 27. 2600 w.; From *Institute of Electrical Engineers,* January 25, 1924, vol. 30. 1000 w.

65 **Modern Business Education and Research.** J. MAYER. *Scientific Monthly,* March, 1925, vol. 20, pp. 257-69.

6(072) **Principles of the Research Corporation and Their Applications to Industry.** A. A. HAMERSCHLAG. *Chemical Age,* New York, August, 1924, vol. 32, pp. 325-5. 1500 w.

6(072) **Research and Industrial Prosperity.** *Chemical Age,* London, Nov. 29, 1924, vol. 11, p. 555. 280 w.

6(072) **Research in Industry.** *Engineering,* Oct. 10, 1924, vol. 118, pp. 522-3. 1500 w.

6(072) **Research in Industry.** C. PARSONS. *Railway World,* June 19, 1924, vol. 55, p. 306. 600 w.

6(072) **Research in Modern Industry.** R. W. EDMONDS. *Manufacturers' Record,* May 1, 1924, vol. 85, pp. 113-5. 1600 w.

6(072) **Research, the Mother of Industry.** *Power Plant Engineering,* March 15, 1924, vol. 28, p. 344. 700 w.

6(072) **Research, the Mother of Industry.** A. D. LITTLE. *Michigan Technic,* May, 1924, vol. 37, pp. 18, and 26-8. 2500 w.; *Scientific Monthly,* August, 1924, vol. 19, pp. 165-9. 2200 w.; *Transactions American Society for Steel Treating,* February, 1924, vol. 5, pp. 195-200. 5500 w.

6(072) **Science and Business.** J. J. CARTY. *Bell Telephone Quarterly,* July, 1924, vol. 3, pp. 145-54. 10 pp.

6(072) **To Aid Manufacturers' by Research Work.** *Iron Trade Review,* March 20, 1924, vol. 74, pp. 803-4. 400 w.

RESEARCH—GENERAL

Laboratories

6(072) **American Bureau of Standards. Wide Range of Activities.** *Chemical Trade Journal and Chemical Engineer,* March 7, 1924, vol. 74, p. 285. 500 w.

6(072) **British Marine Biological Laboratories and Their Work.** M. V. LEBOUR. *Discovery,* February, 1925, vol. 6, pp. 51-5. 2900 w.

6(072) **British National Physical Laboratory.** *Electrical Engineer,* Jan. 15, 1925, vol. 1, p. 391. 800 w.

6(072) **Das National Physical Laboratory in Teddington.** *Elektrotechnik und Maschinenbau,* Feb. 8, 1925, vol. 43, pp. 107-9. 1100 w.

660.58 **Design of a Chemical Research Laboratory.** C. HOLLINS. *Chemical Age,* London, April 25, 1925, vol. 12, pp. 394-6. 2500 w.

6(072) **English Home of Scientific Wizardry. National Physical Laboratory at Teddington.** W. H. RICHARDS. *Mechanical Boy,* Jan. 22, 1925, vol. 1, pp. 483-5. 1500 w.

62 **Grosszahlforschung.** (Large scale research). K. DAEVES. *Stahl und Eisen,* Jan. 15, 1925, vol. 45, pp. 79-86. 5000 w.; Jan. 22, 1925; vol. 45, pp. 109-14. 1300 w.

6(072) **Henley Research Laboratories.** *India Rubber Journal,* Dec. 6, 1924, vol. 68, pp. 7-9. 1500 w.

6(072) **Large New Research Laboratories in England.** *Electrical World,* March 14, 1925, vol 85, p. 558. 500 w.

658.3 **Le Laboratoire Psychotechnique.** J. Bover. *La Nature,* Jan. 31, 1925, No. 2652, pp. 69-75. 3000 w.

6(072) **Le National Physical Laboratory, ou Laboratoire National Brittanique de Teddington, pres de Londres.** (National Physical Laboratory at Teddington). H. Stroh. *Genie Civil,* Nov. 8, 1924, vol. 85, pp. 413-19. 4900 w.

6(072) **National Physical Laboratory.** *Iron and Coal Trade Review,* June 22, 1923, vol. 106, p. 943. 2000 w.

6(072) **Notes on the Vickers Research Building at the British Empire Exhibition.** *Marine Engineer and Motorship Builder,* November, 1924, vol. 47, pp. 427-8. 1000 w.

6(072) **Research and the Modern Industrial Laboratory.** L. A. Hawkins. *Chemistry, Engineering and Mining Review,* Feb. 5, 1924, vol. 16, pp. 192-6. 3100 w.; *Indian and Eastern Engineer,* February, 1924, vol. 54, pp. 63-5. 3000 w.; *Journal Association of Chinese and American Engineers,* January, 1924, vol. 5, pp. 83-90. 4500 w.

6(072) **Testing Laboratory Department of Public Works, Allegheny County, Pa.** N. F. Brown. *American City,* January, 1925, vol. 32, pp. 63-6. 1200 w.

RESEARCH—GENERAL

Organization

6(072) **British Organization of Research.** *Engineering,* Oct. 19, 1923, vol. 116, pp. 499-501. 2200 w.

6(072) **Coordination of Research.** *Engineering,* Oct. 24, 1924, vol. 118, pp. 586-7. 1400 w.

6(072) **Coordination of Research.** J. S. Dow. *Gas Journal,* Jan. 30, 1924, vol. 165, p. 256. 1000 w.

62 **Engineering Research. Department Conducted by American Society of Mechanical Engineers.** *Mechanical Engineering,* July, 1923, vol. 45, pp. 441-2. 1200 w.

6(072) **L'organization de la recherche scientifique experimentale en France.** (Organization of scientific experimental research in France.) J. Villey. *Revue Generale des Sciences Pures et Appliqués,* Nov. 15, 1925, vol. 34, pp. 601-7. 6000 w; Nov. 30, 1923, vol. 34, pp. 643-8. 5000 w.

6(072) **L'organization des recherches.** (Organization of research.) P. Petit. *Chimie et Industrie,* May, 1923, vol. 9, pp. 1023-5. 2000 w.

6(072):657.5 **Management of Industrial Research.** J. M. Weiss and C. R. Downs. *Chemical and Metallurgical Engineering,* April 7, 1924, vol. 30, pp. 549-54. 4300 w.

6(072) **Organization, Work and Purposes of the American Association for the Advancement of Science.** *Science,* Feb. 1, 1924, vol. 59, pp. 113-17. 3800 w.

6(072) **Research in Europe.** M. Holland. *Chemical and Metallurgical Engineering,* Jan. 5, 1925, vol. 32, p. 16. 600 w.

6(072) **Research in the Union of South Africa.** *South African Journal of Industries,* June, 1924, vol. 7, pp. 404-12. 4500 w.

6(072) **Research Organization in Africa.** *South African Engineering,* October, 1923, vol. 34, pp. 197-8. 1000 w.

6(072) **Scientific Research in Australia.** *Industrial Australian and Mining Standard,* June 12, 1924, vol. 71, pp. 875-6. 2100 w.

6(072) **Scientific Research in New Zealand.** J. A. THOMSON and G. M. THOMSON. *New Zealand Journal of Science and Technology,* December, 1923, vol. 6, pp. 234-56.

6(072) **Scientific Research in South Africa.** *South African Engineering,* November, 1924, vol. 35, p. 218. 500 w.

6(072) **Separate Department for Research Work.** *Oil and Gas Journal,* March 5, 1925, vol. 23, p. 64. 225 w.

6(072) **What Machinery Is Necessary for the Management of Industrial Research.** J. M. WEISS and C. R. DOWNS. *Chemical and Metallurgical Engineering,* March 24, 1924, vol. 30, pp. 475-8. 3100 w.

RESEARCH—GENERAL
Reports

6(072) **Annual Report of the Department of Scientific and Industrial Research.** *British Cast Iron Research Association Bulletin,* No. 7, January, 1925, pp. 11-15. 500 w.

6(072) **Department of Scientific and Industrial Research. Report for the Year 1922-1923.** *Chemical Age,* London, Oct. 13, 1923, vol. 9, pp. 390-1. 2000 w.

6(072) **First Research Report by National Transportation Institute.** *Railway Review,* Feb. 2, 1924, vol. 74, pp. 208-9. 500 w.

621.3 **National Physical Laboratory. Annual Report.** *Electrical Review,* April 24, 1925, vol. 96, pp. 650-1. 1900 w.

6(072) **Report of the Committee of the Privy Council for Scientific and Industrial Research for the Year 1922-23.** London, 1923. 141 pp.

016.6 **Subject Index of Reports of Investigations. 1919-24.** H. E. TUFFT and E. V. BRANDENBURG. *Bureau of Mines.* Serial 2667. 35 pp.

6(072) **Year's Government Research.** *Chemical Age,* London, Oct. 11, 1924, vol. 11, pp. 369-70. 1100 w.

RESEARCH—GENERAL
University

6(072) **Institute of Research Launched at Lehigh.** *Refrigerating World,* October, 1924, vol. 59, p. 26. 600 w.

6(072) **John Simon Guggenheim Memorial Fellowships.** *Engineering and Mining Journal,* March 7, 1925, vol. 119, p. 396. 600 w.

6(072) **Jungle Laboratory of Tropical Biology Conducted by the University of Pittsburgh,** A. EMERSON. *Science,* March 13, 1925, vol. 61, p. 281. 300 w.

6(072) **Lehigh Institute of Research.** *Chemical Age,* New York, October. 1924, vol. 32, p. 432. 700 w.

6(072) **Milton Fund for Research of Harvard University.** *Science,* Oct. 3, 1924, vol. 60, pp. 311-12. 400 w.

6(072) **Organization and Functions of the Institute of Research of Lehigh University.** *Lehigh Institute of Research,* Circular No. 1, June, 1924. 19 pp.

6(072) **Recent Research Work at the Municipal College of Technology, Manchester.** *Gas Journal,* June 18, 1924, vol. 166, p. 850. 500 w.

6(072) **Research and the American College.** M. M. METCALF. *Science,* Jan. 11, 1924, vol. 59, pp. 23-7. 3000 w.

6(072) **Research Club of the University of Michigan.** *Science,* April 3, 1925, vol. 61, p. 361.

6(072) **Research Graduate Assistantship at the University of Illinois.** *Mining and Metallurgy,* February, 1925, vol. 6, p. 67. 300 w.

6(072) **Research in Colleges.** E. C. BINGHAM. *Science,* Feb. 13, 1925, vol. 61, pp. 174-6. 1800 w.

62 **Research Is Greatly Needed in Engineering Schools.** T. S. BAKER. *Arizona Mining Journal,* March 1, 1924, vol. 7, pp. 32-3. 700 w.

6(072) **Research Prize at the University of Virginia.** *Science,* Jan. 23, 1925, vol. 61, p. 82. 400 w.

6(072) **Research Work at Birmingham University.** *Chemical Age,* London, Jan. 24, 1925, vol. 12, pp. 80-1. 1000 w.

378.33 **Universities Offer Fellowships.** *Mining Congress Journal,* April, 1924, vol. 10, p. 148. 400 w.

6(072) **University Research Work.** *Railroad Herald,* October, 1924, vol. 28, p. 11. 300 w.

6(072) **Valuable Research Work to Be Undertaken at the University of Illinois.** *Clay Worker,* June, 1924, vol. 81, p. 660. 200 w.

RESEARCH—GENERAL

Value

6(072) **Are Research Staffs a Failure?** *Chemical Age,* London, Oct. 25, 1924, vol. 11, p. 410. 800 w.

6(072) **Earning Power of Research.** *Industrial and Engineering Chemistry,* November, 1924, vol. 16, p. 1104. 400 w.

6(072) **Earning Power of Research.** I. K. RUSSELL. *Industrial and Engineering Chemistry,* June, 1923, vol. 15, pp. 645-7. 1500 w.

6(072) **Failure of Intensified Research Work in England.** J. G. A. RHODIN. *Engineer,* Oct. 17, 1924, vol. 138, pp. 430-33. 4000 w.

6(072) **Give Scientific Research a Fair Trial.** A. OBERLE. *Chemical Age,* New York, November, 1924, vol. 32, p. 453. 700 w.

6(072) **Importance of Research.** *Science and Art of Mining,* Aug. 2, 1924, vol. 35, p. 11. 250 w.

6(072) **Industrial Research as a Factor in Progress.** A. W. MELLON. *Chemical Age,* New York, January, 1924, vol. 32, pp. 15-16. 1500 w.

6(072) **Limitations of a Research Department.** *Engineering,* Nov. 16, 1923, vol. 116, pp. 625-6. 2200 w.

6(072) **Old Order Changeth—But Process Is Slow and Painful.** E. L. SHANER. *Iron Trade Review,* Jan. 1, 1925, vol. 76, pp. 3-7. 2500 w.

6(072) **Profitable Science in Industry.** D. T. FARNHAM, J. A. HALL, R. W. KING *and* H. E. HOWE. Published by *MacMillan Company,* New York, 1925. 291 pp.

6(072) **Research and Industrial Prosperity.** *Chemical Age,* London, Nov. 29, 1924, vol. 11, p. 555. 280 w.

6(072) **Research and Progress.** J. J. THOMSON. *Electrician,* Feb. 20, 1925, vol. 94, pp. 197-8. 800 w.

621.1 **Second Report of the Steam-Nozzles Research Committee.** *Proceedings Institution of Mechanical Engineers,* Nov. 3, 1923, vol. 1, pp. 311-95.

621.11 **Steam Nozzles Research.** *Industrial Australian and Mining Standard,* July 3, 1924, vol. 72, p. 16. 900 w.; *Engineer,* Oct. 10, 1924, vol. 138, p. 418. 1400 w.

621.1 **Steam Research.** I. V. ROBINSON. *Power,* July 28, 1925, vol. 62, pp. 134-6. 2400 w.

621.1 **Steam Research Promises Much for Power-Plant Engineers.** P. W. SWAIN. *Power,* Aug. 5, 1924, vol. 60, pp. 200-2. 1600 w.

621.1 **Third Report of the Steam-Nozzles Research Committee.** G. G. STONEY. *Proceedings Institution of Mechanical Engineers,* 1924, No. 5, pp. 715-35.

621.1 **Third Report of the Steam-Nozzles Research Committee. Institution of Mechanical Engineers.** *Engineering,* May 23, 1924, vol. 117, p. 657 and 681-7.

628.53 **To Determine Relation of Low-Pressure Boilers to Smoke Nuisance.** *Chemical and Metallurgical Engineering,* April 7, 1924, vol. 30, p. 548. 400 w.

TELEPHONY

621.3 **Bell System Research Laboratories.** E. B. CRAFT. *Electric Communication,* January 1924, vol. 2, pp. 153-63. 3000 w.; *Journal Association Chinese and American Engineers,* August, 1924, vol. 5, pp. 46-9. 1800 w.

621.385 **Engineering Research in the Post Office.** B. S. COHEN. *Telegraph and Telephone Journal,* December, 1924, vol. 11, pp. 46-9. 2000 w.

621.385 **Meaning of Research to the Telephone Investor.** R. W. KING and G. C. SOUTHWORTH. *Bell Telephone Quarterly,* April, 1924, vol. 3, pp. 65-75.

621.3 **New Telephone Research Company Organized.** *Engineering News Record,* Feb. 5, 1925, vol. 94, p. 244. 100 w.

621.385 **Post Office Research Station.** *Electrical Review,* Aug. 8, 1924, vol. 95, pp. 217-19. 1500 w.

621.3155 **Research Laboratories at Henley's Cable Works.** *Engineer,* Nov. 28, 1924, vol. 138, pp. 736-8. 1700 w.

TEXTILES

677 **British Research Association for the Woolen and Worsted Industries.** J. P. HINCHLIFFE. *Journal Textile Institute,* March, 1924, vol. 15, pp. 91-2. 700 w.

677 **Bureau of Standards. (Textile Investigations).** G. A. BURGESS. *Textile World,* April 11, 1925, vol. 67, pp. 95, 97, 99. 3000 w.

677 **Chemical Work of the Shirley Institute. Progress of Cotton Research.** D. A. CLIBBENS *Chemical Age,* London, Feb. 28, 1925, vol. 12, p. 202. 400 w.

677 **Fundamental Research Progress in Great Britain.** *Textile World,* Aug. 2, 1924, vol. 66, pp. 61-2, 89 and 91. 2000 w.

677 **Fundamental Textile Research How and Why.** D. G. WOOLF and others. Symposium. *Textile World,* Feb. 7, 1925, vol. 67, pp. 204-12.

677 **Industrial Silk Researches.** W. F. EDWARDS. *Textile World,* June 23, 1923, vol. 63, pp. 59, 61 and 99. 3000 w.

677 **Industrial Textile Research.** *Color Trade Journal,* February, 1925, vol. 16, pp. 34-5. 1200 w.

677 **Lifetime Search for a New Fibre.** *Textile World,* March 1, 1924, vol. 65, p. 78. 1000 w.

63.54 **Linen Industry Research.** *Chemistry and Industry,* April 24, 1925, vol. 44, p. 416. 400 w.

677 **Linen Research Association: Report for 1923.** F. B. *Journal Textile Institute,* March, 1924, vol. 15, p. 84. 500 w.

677 **Linen Industry Research.** *Chemistry and Industry,* April 24, 1925, vol. 44, p. 416. 400 w.

677 **Need for Fundamental Research.** J. BANCROFT. *Textile World,* Oct. 25, 1924, vol. 66, pp. 63-4, 68. 1300 w.

677 **Notes on Fundamental Textile Research Project.** W. F. EDWARDS. *Textile World,* Feb. 7, 1925, vol. 67, pp. 205-7. 2500 w.

677 **Need for Research in the Textile Industry.** *Color Trade Journal,* September, 1924, vol. 15, pp. 70-1. 1900 w.

677 **Physical Research in the Cotton Industry.** A. E. OXLEY. *Proceedings and Memoirs Manchester Literary and Philosophical Society,* 1923-4, vol. 68, pp. 69-80.

677 **Progress in Cotton Research.** D. A. CLIBBENS. *Chemical Trade Journal and Chemical Engineer,* Feb. 27, 1925, vol. 76, pp. 269-70. 240 w.

677 **Progress in Mildew Research.** F. SUMMERS. *Journal Textile Institute,* April, 1925, vol. 16, pp. 87-9.

677 **Practical Value of Research.** *Textile World,* March 8, 1924, vol. 65, pp. 35 and 37. 1200 w.

677 **Recent Textile Research.** G. B. HAVEN. *Textile World,* May 3, 1924, vol. 65, pp. 122, 125 and 127. 3000 w.

677 **Research in Relation to the Cotton Industry.** A. W. CROSSLEY. *Journal Textile Institute,* July, 1924, vol. 15, pp. 209-13. 2400 w.

677 **Research in Relation to the Linen Industry.** J. V. EYRE. *Journal Textile Institute,* July, 1924, vol. 15, pp. 219-24. 2400 w. With discussion.

677 **Research in Relation to the Woolen and Worsted Industries.** H. J. W. BLISS. *Journal Textile Institute,* July, 1924, vol. 15, pp. 214-18. 2200 w.

677 **Researches in Artificial Silk Industry.** E. CAGLIOSTRO. *Color Trade Journal,* December, 1923, vol. 13, pp. 205-8. 300 w.

677 **Suggested Plan for a Research Institute.** W. F. EDWARDS. *Textile World,* Sept. 6, 1924, vol. 66, pp. 65-6. 1800 w.

677 **Technological Research Laboratory, Bombay.** *Indian and Eastern Engineer,* January, 1925, vol. 56, p. 27. 300 w.

677 **Wool Characteristics: A Valuable Research Completed.** D. T. N. *Journal Textile Institute,* March, 1924, vol. 15, pp. 81-2. 500 w.

WIRE CABLES AND ROPES

677.72 **Cable Development and Research.** F. L. RHODES. *Bell Telephone Quarterly,* January, 1924, vol. 3, pp. 30-40.

677.2 **Cable Research.** *Journal American Institute Electrical Engineers,* February, 1925, vol. 44, p. 141. 100 w.

677.72 **Research and Cables.** *Electrician,* Dec. 5, 1924, vol. 93, pp. 634-6. 1300 w.

677.72 **Research in the Cable Industry.** *Electrician,* Nov. 21, 1924, vol. 93, p. 577. 400 w.

677.72 **Research in the Cable Industry.** *Electricity,* Nov. 28, 1924, vol. 38, pp. 645-6. 700 w.

677.72 **Research Laboratories at Henley's Cable Works.** *Engineering,* Nov. 28, 1924, vol. 118, pp. 736-8. 1700 w.

677.72 **Research Work in Colliery Roping Steels.** *Colliery Engineering,* May, 1924, vol. 1, pp. 123-7. 1900 w.

677.72 **Wire Ropes Research.** W. A. Scoble. *Colliery Guardian,* Dec. 24, 1924, vol. 128, pp. 1619-21. 3500 w.; *Engineering,* Jan. 2, 1925, vol. 119, pp. 20-1. 500 w.; Jan. 30, 1925, vol. 119, pp. 143-5. 2600 w.; *Machinery,* Jan. 8, 1925, vol. 25, p. 475. 800 w.; *South African Engineering,* Jan. 15, 1925, vol. 36, p. 2. 400 w.; *Engineer,* Jan 30, 1925, vol. 139, p. 128. 1000 w.

WOOD AND WOOD PRESERVATION

674 **The Need for Research Into the Hardwoods of Australia.** I. H. Boas. *Industrial Australian and Mining Standard,* March 13, 1924, vol. 71, p. 409. Serial. 3100 w.; April 3, 1924, vol. 71, p. 507. 1900 w.

691.1 **Wood-Preservation Research and the Wood-Preservation Industry.** *Chemical Age,* New York, July, 1924, vol. 32, p. 313. 450 w.

Z7914. R5N2

a39001 006196946b

Z 7914 R5N2 SS
NAT. RESEARCH COUNCIL*BIBLIOGRAPHY ON

INSERT BOOK MASTER CARD FACE UP IN FRONT SLOT OF S.R. PUNCH

UNIVERSITY OF ARI
LIBRARY

MASTER CARD

DD-W 22282-D